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British Columbia Provincial Museum

TWO-YEAR REVIEW 1981-82

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BRITISH COLUMBIA PROVINCIAL MUSEUM

Two-year Review:

1981-1982

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HERITAGE RECORD #17

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1984

The Provincial Museum Act (1967) says:

4. The objects of the Provincial Museum shall be

   (a) to secure and preserve specimens and other objects which illustrate the natural history and human history of the Province;

   (b) to increase and diffuse knowledge in these fields by research, exhibits, publications, and other means.

PREFACE

The British Columbia Provincial Museum has published annual reports in some detail since 1912. Since 1970 these reports have been included in ministry annual reports, with some loss in content. Beginning in 1979, ministry reports became very brief; and the Museum's content then satisfied few of the requirements of periodic reporting required by major museums around the world.

This Review follows economical publishing trends being pioneered by other museums and, so, is a low-cost response to the archival need of a record of activities and people, and the requirement of the Museum Act (1967) for a useful annual review of accomplishments.

Yorke Edwards
Director

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BRITISH COLUMBIA PROVINCIAL MUSEUM
REVIEW - 1981

Yorke Edwards, Director

The most visible triumph of the year was the opening of the Museum's new Argillite Gallery in May. It is a permanent exhibition containing the superb collection of argillite carvings donated to the Museum by Mr. and Mrs. Francis C. Reif of Vancouver, and showing also many pieces from the Museum's collection. The opening ceremony took place among the totem poles in the First Peoples Gallery with Mr. Reif the key speaker, accompanied by Haida carver Robert Davidson and other distinguished people.

On its return from England, Legacy, our large travelling exhibition, had its Canadian debut in November when it opened in the Museum of Anthropology on the campus of the University of British Columbia. It was gratifyingly successful, attracting an unusual amount of attention in print during its stay.

Space problems and financial restraint generated change. Basement offices of the Exhibits Division were found unsuitable because of ventilation problems, so the staff moved into the boardroom on the main floor Mezzanine. A small boardroom was made in the foyer of Newcombe Auditorium. At the end of March, provincial support for programs in Newcombe Auditorium ceased, so the facility remained largely unused for most of the year. Asbestos hazards throughout the natural history exhibition floor delayed work on new permanent exhibitions through most of the year. Removal of asbestos in 1982 will delay progress as well.

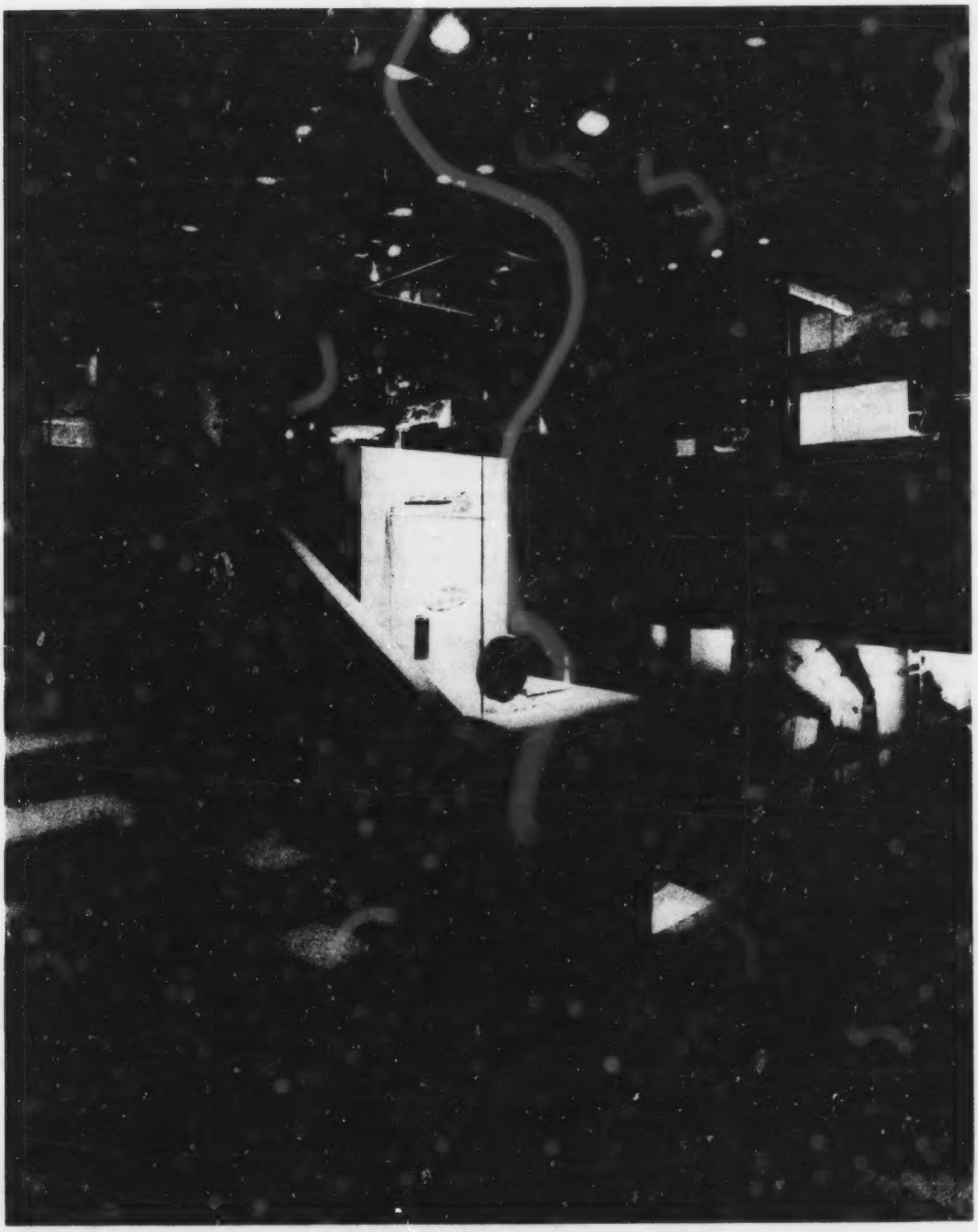
On the bright side, visitor numbers to the Museum through the year were the highest in the Museum's 95-year history; 1,400,000 entrances through the main doors were tallied. During the summer, a unique expedition to the remote Brooks Peninsula, on the northwest coast of Vancouver Island, was led by the Museum, and involved 18 scientists in eight disciplines from several institutions in a study of the peninsula's pleistocene history and current natural history. Helicopters vastly increased productivity in the rough terrain and tangled vegetation. The expedition was funded by the Friends of the Provincial Museum, one of 38 museum projects funded by the Friends in 1981. Another sort of project in the 38 was the purchase of a sophisticated word processor assembly with two work stations, giving future potential for stations throughout the museum's many (13) offices.

It has perhaps failed to be recorded in annual reports that in 1981 the Museum assumed responsibility for the Transportation Museum in Richmond, formerly administered from the Deputy Minister's office. Subsequently it has been renamed The Transport Collection of the British Columbia Provincial Museum. The nucleus of this collection was the donation of 14 trucks to the government by the widow of Mr. A. King in 1974. This operation is now essentially an inactive part of the museum except for a small number of visitors and two mechanics doing restorations and reconstructions.

Also in 1981, the Museum assumed responsibility for ensuring proper care of the collection and property of the British Columbia Forest Museum near Duncan. This museum is administered by a non-profit society, but receives an annual grant and other assistance through the budget of the Museum.

The Museum's travelling exhibits have had far flung success, largely unsung, through a decade of taking the Museum throughout the province. Through 1981 we moved 15 exhibits into small communities 22 times. This program and our publishing program are the museum's most evident contact with those British Columbians living at some distance from Victoria.

Among the publications produced during the year were our science journal Syesis; Sea Stars of British Columbia, a handbook; Ecological Reserves, some papers from a symposium; Analysis and Interpretation of Archaeological Soils, on extracting new information about ancient peoples from the soil; The World is as Sharp as a Knife: an Anthology in Honour of Wilson Duff; and Directory of Museums, Art Galleries and Archives in British Columbia. In addition, the Federal Department of Fisheries and Oceans, with assistance from the Friends of the Provincial Museum, published: Sedentariate and Archiannelid Polychaetes of British Columbia and Washington. Katherine Hobson, senior author and Research Associate of the Museum until her death in 1975, did much of the study. Karl Banse, junior author and her co-researcher, completed their joint study through to publication.



The entrance to the new Argillite Gallery

Lists printed elsewhere in this book reveal that 280 volunteers gave their time and skills to the Museum through the year. These are enthusiastic people dedicated to their work, which many have assured me is its own interesting reward. Who can know how many hours they really gave? Someone has estimated it is 20,000 hours. In some awe at their numbers and energy, we thank our many volunteer partners for their major role in making this museum famously successful.

All years in large museums are good years, with some better than others, and all of them filled with gratifying highlights and unexpected accomplishments. This year was a good one, as the following accounts will attest.

AQUATIC ZOOLOGY DIVISION

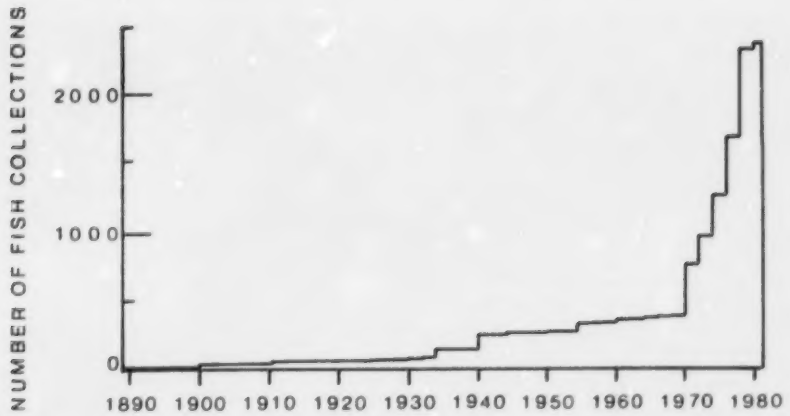
Alex Peden, Curator

September, 1981, represents a tenth anniversary for the Division. While fish specimens collected as early as 1889 are still housed in the Museum, formal designation of the Division did not take place until ex-director Dr. Clifford Carl stepped down to curate aquatic collections just before his death in 1970. Carl's replacement was hired in September, 1971, after which the major growth of aquatic collections began. Today, the Division has a staff of six: A. E. Peden, Division Head and ichthyologist; Philip Lambert, Associate Curator and invertebrate biologist; B. Cooke, Technician III, in charge of SCUBA facilities, underwater photography, and general photographic filing; G. Green, Technician II, responsible for boat, field gear, and aquarium maintenance as well as routine care and maintenance of invertebrate collections; G. Hughes, Technician II with overall responsibility for ordering laboratory supplies, care of fish collection, and routine analysis of fish research data; and L. Macdonald, stenographer, shared with the Entomology Division.

This renewed activity with an enlarged staff is dramatically illustrated by the growth in the fish and invertebrate collections (Figs. 1 and 2). Specimens of fish were slowly accumulated from 1889 to 1969, but there was a fifty-fold increase from 1970 to 1980. Perhaps half of the specimens obtained prior to 1971 disappeared because of improper preservation and inadequate curatorial care (lost specimens not included in graph, Fig. 1). New techniques emphasizing new trends toward statistically representative samples are exemplifed by an average of about 4.7 fish specimens per collection prior to 1970 to approximately 23.4 since 1970.

The collections of specimens from waters off British Columbia are, qualitatively, the most complete faunal coverage of western Canadian marine fishes to be found anywhere. They include approximately 88% (329 of 373) of the Province's known marine species plus as many as 200 more species found in adjacent American waters. Another 87% (73 of 84) of the fresh-water species from British Columbia are also represented. The total fish collection now comprises about 50,000 specimens exclusive of larval fishes. Though qualitatively our collection is a more complete representation for British Columbia, it falls short quantitatively of the 100,000 to 800,000 British Columbia specimens claimed by museums in Seattle, Vancouver, Ottawa and Toronto.

Invertebrate collections have shown a similar growth pattern within the museum but the large number of specialists needed to identify and research the great variety of taxa in British Columbia preclude realistic estimates of species in our holdings. Early records of invertebrate collections are not adequate to graph here (Fig. 2) but after the hiring of Philip Lambert the collections grew quickly from 1973 to 1976. There has been a dramatic slackening in the growth rate of the invertebrate collections since then as the staff shifted from a policy of general collecting to one emphasizing only a few invertebrate taxa relevant to current research projects. The backlog of unidentified invertebrates, and a lack of qualified specialists to study them, necessitates a restricted collecting program. The last of Dr. Ian McTaggart Cowan's shell collection (11,000 lots, not graphed in Fig. 2) was



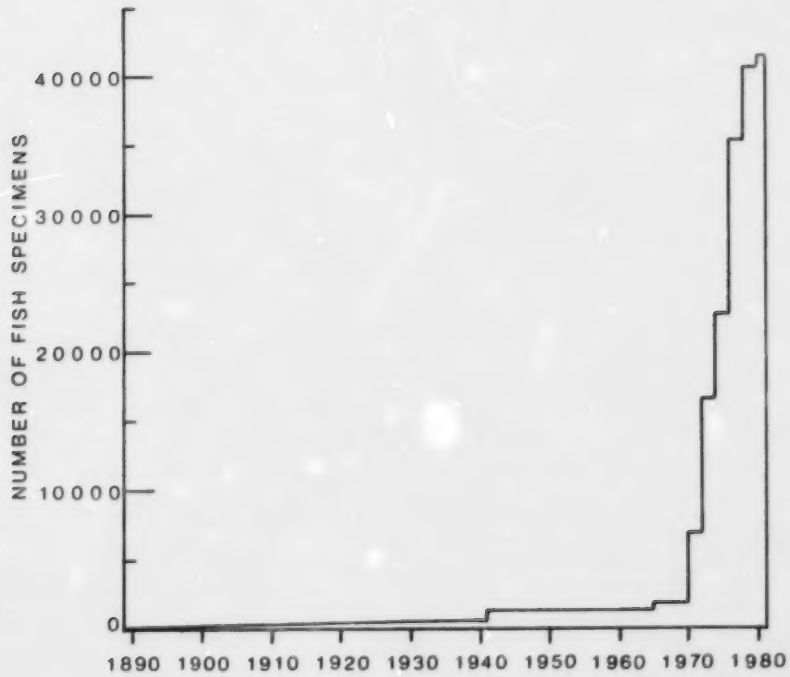


Figure 1. Growth in number of specimens (lower) and number of collections (upper) in the Aquatic Zoology Division 1890-1980.

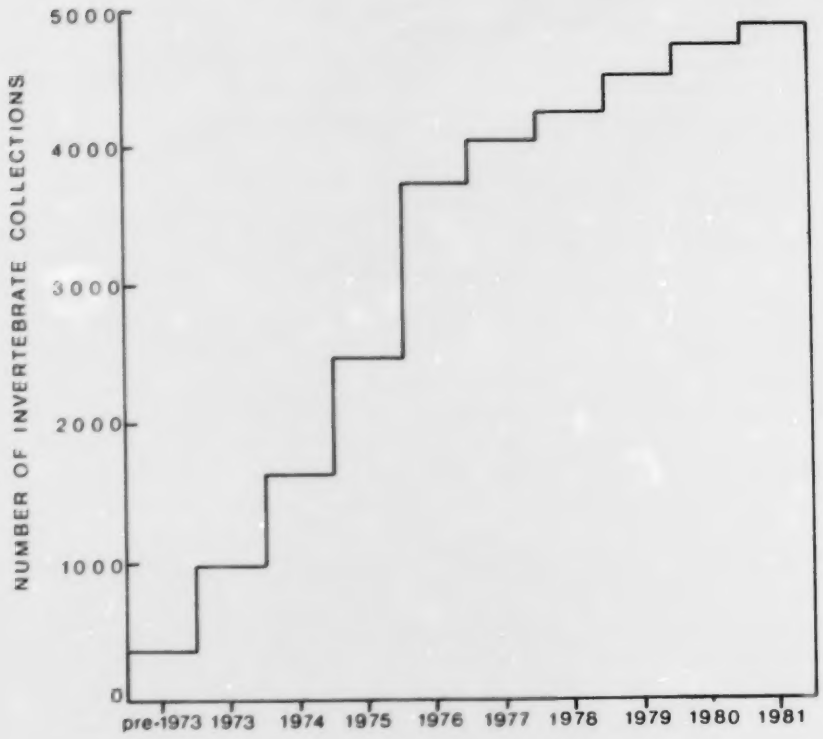


Figure 2. Number of vertebrate collections in Aquatic Zoology Division, pre-1973 to 1980.

catalogued in 1981. The Museum can now claim one of the most complete malacological collections relevant to the northeast Pacific Ocean. Other invertebrate groups were researched (i.e. bryozoans, holothurians) in 1981.

The main celebrations for the Division were Associate Curator Philip Lambert's publication of the Handbook Sea Stars of British Columbia and Hobson and Banse's keys to Sedentariate and Archiannelid Polychaetes of British Columbia and Washington published by the federal Department of Fisheries and Oceans. Because Kay Hobson (1941-1975) was by far the most productive research associate to study invertebrates at the Museum, it was fitting that the Friends of the British Columbia Provincial Museum helped to finance her last major contribution to science.

During 1981, contracts to identify and research bryozoans and sponges were awarded. We now believe the Museum possesses significant reference and research collections of polychaetes (437 species, 93% of known British Columbia species), reptant crustacea (81 species: 90%), gastropod and bivalve molluscs (300 species: 90%), opistobranchs (66 species: 88%), echinoderms (125 species: 87%), porifera (67 species: 39%), bryozoans, and hydroids relevant to the northeast Pacific Ocean. Such claims are subdued by the fact that these are the only significant and permanently housed Canadian invertebrate collections west of Ontario.

Both scientific and popular publications resulted from research on collections with some 16 publications and reports being produced or in preparation. This represents approximately 21% of the Division's total published productivity during the last ten years.

Approximately 106 ichthyologists are on our permanent mailing list and receive reprints of appropriate publications related to fishes. In turn, most recipients respond on an exchange basis. The Division also received, during 1981, 32 unsolicited reprint requests from

other fish researchers plus 17 requests for the monograph by Hobson and Banse. The broad international interest of the Division's taxonomic research is suggested by the worldwide scope of requests for our fish reprints (Table I).

Table I. Geographic distribution of requests for reprints in 1981

	Permanent Reprint Exchange	Unsolicited Requests in 1981
British Columbia	17	0
Rest of Canada	13	1
United States	56	18
Rest of Americas	4	1
Western Europe	3	7
East Europe & USSR	3	0
Japan	9	4
Asia & Australia	1	1

The fish collection was also used widely by scientists, and other museum's collections were borrowed for study both in 1981 and in previous years (Table II).

Table II. Sources of loaned or borrowed fish specimens*

	British Columbia	Rest of Canada	United States	Western Europe	East Europe & USSR	Japan	Aust-ralia	With-in BCPM
Outstanding BCPM loans to other institutions in 1981	9(10)	3(4)	17(6)	0(1)	0	4	1	2
BCPM loans returned 1971 to 1980	13(32)	7(3)	22(12)	0	0	0	0	4(7)
Gifts to other museum 1971 to 1981	4(1)	10(1)	19(3)	1(1)	1(1)	2	0	1
Outstanding loans from other museums to BCPM	4	7	20	0	0	1	0	0
Loans returned to other museums from BCPM 1971 to 1980	17	6	44	0	1	2	0	1

*Figures in brackets represent invertebrate loans

Major research and related curatorial activity underway or completed in 1981 were:

1) Final submission of reports to Committee on Endangered Wildlife within Canada (financially assisted by World Wildlife Fund) on the reputedly rare speckled dace (Rhinichthys osculus). We found this species to be abundant but Canadian populations are restricted to the Kettle River. A sidelight was the discovery of another form of Rhinichthys in the Washington State portion of the Kettle River but inhabiting the Canadian portion of the Kettle River for just 3 miles upstream from the American border.

2) Submission of a preliminary report and preparation of a final report on shorthead sculpin (Cottus confusus) that included results of an August, 1981, survey in the Flathead River basin. Although this population was found to be abundant, it is also restricted to the lower Canadian portion of the Flathead River and could become endangered if Sage Creek Coal development proceeds.

3) Cataloguing of valuable comparative material captured in 1980 during Peden's invitation on a fisheries survey to Bering Sea.

4) Receipt and research of new fish species for British Columbia in particular the queen fish (Seriphus polita) and a number of eelpouts donated by Canada's Fisheries and Oceans, Biological Station at Nanaimo.

5) Collection of Canadian populations of longfin cockscomb (Anoplarchus) for electrophoretic studies relevant to population genetics (collaboration with researchers in Tennessee and Berkeley, California).

6) A two-part study on the systematic and ecological relationships between the gunnels Pholis laeta and P. ornata.

   i) Monthly collections over a year and trapping, marking, seining, stomach analyses, aging and laboratory studies on circadian rhythms of the species to shed light on competitive interactions (part of this work is also part of a Master's program for G. W. Hughes).

   ii) Comparison of museum and field samples (4000 to 5000 specimens) between California, Bering Sea and Japan to establish geographic distribution, variation and validity of three species.

7) Joint museum expedition to collect fishes and other information relevant to the question of possible glacial refugia on the Brooks Peninsula.

8) After completion of The Sea Stars of British Columbia, work is proceeding toward another Handbook on Holothurians (sea cucumbers).

9) Photographic collection being reorganized with duplicate photographs as an adjunct to educational and research programs.

10) The museum vessel Nesika made its first trip around Vancouver Island and enlarged our geographic coverage of collections within British Columbia.

11) The extensive fish collections from Canadian Weathership at Ocean Station Papa (50°N, 145°W) obtained by this Museum in 1979 and the National Museum of Canada in 1971 were identified, processed and preliminary manuscripts prepared.

12) Discussion and preparation toward a supplement to J. L. Hart's Pacific fishes of Canada (Bull. Fish. Res. Bd. Canada 180:1-740) initiated, and the illustrations made of 25 of the 70 to 80 fish species required, were begun. A large reference file to British Columbia fishes is established but lack of manpower restricts the files' growth.

13) Taxonomic revisions, started in previous years for the fish genera Radulinus and Icelinus, as well as morphological studies on Careproctus, were continued.

14) In light of recent findings on meristic variation of fishes, many species have been radiographed with the X-ray machine financed by the Friends of the British Columbia Provincial Museum and a large reference file of radiographs accumulated. Major observations on distinguishing species of Leuroglossus and Lycodapus and the discovery

of distinct, deep-water populations in the Strait of Georgia, and general north/south clines of British Columbia fishes are being documented.

15) Identified 250 lots of 35 species of sea cucumbers from the Fisheries Research Board collections at Nanaimo. A technical report on the project is now in preparation.

16) Description of a new species of Parastichopus (sea cucumber) is in progress. Two more possible new species have turned up in collections but are yet to be described.

17) 10-day collecting trip on University of Victoria launch, Strickland, from Bella Bella to Tofino collecting invertebrates.

18) Used the University of Victoria's scanning electron microscope to photograph sea cucumber ossicles for taxonomic research and illustrations for handbook.

Staff members attended the American Society of Herpetology and Ichthyology meetings in Corvallis, Oregon, and received a commitment from that organization to meet in Victoria, during the Museum's centennial year in 1986. The Division's invertebrate specialist also attended the 1981 International Echinoderms Conference in Tampa Bay, Florida, which marked the third time that scientists in this area of research have met.

Our public-oriented program included continued collaboration with the Display Division to produce the proposed underwater exhibit. A poster exhibit, illustrating utility and benefits of colour photographic collections integrated within the general curatorial routine of aquatic collections, was submitted to the poster sessions of a workshop sponsored by the National Museum of Canada in Ottawa on collection methods and problems of Canadian natural history collections. Field trips were organized with the Victoria Natural History Society and some public lectures delivered.

As a final note, the progress and development of the Division over the last decade has been remarkable, especially since there are few other Canadian museums similarly endowed to study and exhibit the fresh-water and marine environments.

ARCHAEOLOGY DIVISION

Donald N. Abbott, Curator

The year has been productive for the Division. There was relatively little staff change. Richard Inglis acted throughout the year as head of the Extension Section filling in for Dr. Gay Frederick (née Calvert) who was on maternity leave until mid-November, then returned on a part-time basis to concentrate on writing the Hesquiat environmental volume. Research Associate Dr. Ron Nash finished his sabbatical year with us and returned to Nova Scotia. We are again grateful for the voluntary assistance of Mrs. Gretchen van den Bergh.

Field work - Field research included organization of and participation in the major multi-disciplinary project on the Brooks Peninsula, west coast of Vancouver Island. In addition to locating archaeological sites, members of the Division made major contributions to understanding the environmental history over several thousand years of this area which seems to have been an ice-free refugium during the last glaciation.

Work continued in 1981 on archaeological research in the far northern interior of British Columbia with excavation of a prehistoric site at Muncho Lake (Ig Sk 8), testing at Hudson's Bay Co. Fort Halkett, and the survey and recording of additional sites in the area. Both the Brooks Peninsula and Muncho Lake projects were generously supported by the Friends of the Provincial Museum.

Division staff participated this year in the annual expedition to the Ninstints Village site on Anthony Island (recently declared a World Heritage Site by UNESCO) where they worked on arresting the decay of the remaining magnificent totem poles and house remains. The archaeologists carried out limited excavations through the Historic Period fill around the stumps of two poles to enable conservation analysts to observe the rate and processes of decay in the wood beneath the soil surface.

The palaeobotanical program, begun in 1980, continued vigorously this year with several pollen cores taken in the Fraser Delta, Brooks Peninsula, near Gore Creek, Kamloops Lakes, Lynn Canyon, the Slocan, Canal Flats and Pitt Meadows. Additions were made as well to the comparative collection of plant parts.

Smaller field projects ranged from investigation, recording and coring of red cedar trees, logs, and stumps showing marks of nineteenth-century native logging at Hankin Cove, Kyuquot Sound, the emergency salvage of a burial cairn in View Royal, recovery of a large series of turn-of-the-century bottles and crockery from a construction site across the street from the Museum, and to assisting police in a criminal investigation.

Preparatory work also began on a major contract with Parks Canada to carry out, over three years, an archaeological inventory of Pacific Rim National Park.

Studies - Research included preparation or analysis of data brought back from field work carried out this year and in past years. As well as the projects noted above, important progress was made with the Hesquiat project, completion of a dissertation on Hesquiat faunal analysis, detailed analysis of trade beads and other historic goods, and work on the introductory volume of the Hesquiat publication series. A paper on the palaeoecology of the Bear Cove site was completed and joint papers on holocene sea levels and on glacial lag in the northwest were submitted for publication. Long-awaited improvements to the palaeoecology laboratory and the gift, by the Friends of the Provincial Museum, of a Nikon Biophot microscope greatly assisted this program. The pioneering research on identification of blood film residues on ancient stone tools continued with further positive results and improvements in techniques. Staff also experimented with the tanning of a moose hide using aboriginal tools and techniques. Finally, description of the basketry cache site Eg St 2 was completed and published. Members of the Division presented an internal seminar on important research developments for their colleagues and associates.

Public contacts - Display activities included installation of the Gore Creek Geotome, preparation and installation of a new audiovisual introduction to the Native Peoples exhibits, and modifications to the existing Archaeology gallery. Plans are being considered for improving the pithouse display. A small case on the Archaeology Division was fitted out as part of a temporary display.

Staff gave numerous talks, demonstrations, lectures and seminars during 1981 to museum and community groups, service clubs, schools, colleges, each of the three provincial universities, native organizations, professional meetings, etc. Papers or reports were presented at the following conferences or seminars: Northwest Anthropology (Portland), British Columbia Archaeologists (Victoria), Seminar on Native Museums (Alert Bay), Nuu-chah-nulth Cultural Committee (Port Alberni), Canadian Archaeological Association (Edmonton), Geological Association of Canada (Calgary), and the Calgary Archaeological Conference. Dr. Hebda gave a week-long tour, including six lectures, in Smithers, Kitimat and Terrace. R. Inglis testified before a government committee considering a proposed development in the Prince Rupert-Port Simpson area. G. Keddie and T. Loy presented several well-received prehistoric technology demonstrations to university and school classes and to museum and community groups.

At various times during the year the staff was called upon by other agencies to review and comment upon grant applications and research proposals. The Curator continued active participation in the British Columbia Local Arrangements Committee for the 1983 International Congress of Anthropological and Ethnological Sciences. Assistance was given to Campbell River, Saanich, and Victoria School Districts in developing Native Studies curricula. As usual, many individual public enquiries were dealt with and several tours of the Division or galleries conducted.

Collections - Primary responsibility for management of the Provincial Archaeological Sites file was turned over to the Heritage Conservation Branch at the beginning of the year and Robert Powell was loaned to them for several weeks to train their personnel and assist in setting up procedures.

Forty-two new accessions were added to the collection in 1981. These ranged from single objects or small collections donated by individuals to collections of several hundred catalogued objects, records, and associated materials resulting from field projects (our own projects, and those carried out by others but where the Provincial Museum is repository). Cancellation of the Archaeology Program at Cariboo College in Kamloops will result in the British Columbia Provincial Museum having to take over, in 1982, their large and important research collections from the Southern Interior. A further 22 objects or collections came through the Division in 1981 for identification, documentation, study and return.

A library-type, drawer-checkout system for the artifact collection was instituted this year. Improved inventory and management procedures for the collection have made it possible to begin consolidating the storage of artifacts in drawers with a significant saving of space.

Good progress can be reported for the National Inventory Programme. Some 7,000 artifact records entered into the system are now fully retrievable from the computer. This constitutes almost all of the material recorded from excavated sites in our care. Thousands of new records were added and processed to various stages during the year. The process was aided by inmates of the Kingston Penetentiary who took on the task of entering large quantities of the more straightforward records into the system. Their work is proofed and checked by our staff. Mr. Loy participated in meetings in Ottawa to discuss various aspects of the National Inventory, including proposals for major expansion and improvements in the system.

Basic curation of the human skeletal and faunal collections was assumed by Mr. Keddie in the absence of a faunal technician. Mrs. van den Bergh's voluntary assistance was much appreciated. As usual, there was a steady demand for use of the comparative collection by researchers.

BOTANY DIVISION

R. T. Ogilvie, Curator

Collections - Seven thousand five hundred plant specimens were accessioned into the Division's collection, making a total of 112,500. Major collections were received from Terrestrial Studies Branch, Ministry of Environment; G. Douglas collections from the southern Selkirk and Cascade Mountains; and bryophytes from Simon Fraser University. Loans of specimens were made to and received from herbaria around the world: Vancouver, Washington, Oregon, Montana, Edmonton, Saskatoon, Swift Current, Missouri, Michigan, Toronto, Ottawa, New Mexico, Harvard University, New York, Washington D.C., London and Paris.

Exhibits - A travelling exhibit The Herbarium of Louis XIV was on display at the Museum from April 11 to May 2, the invitation notice for which featured an original painting of Iris missouriensis done by the Botanical Illustrator. Planning by the Curators continued on additional phases of the Natural History Exhibit, an exhibit on seashore plants, and on edible wild plants.

Native Plant Display Gardens - A brochure guide to the gardens was printed. New plants were collected for replacing the garden stock, and propagation was continued at the nursery with seed and transplants. Routine maintenance of the gardens by contractors was supervised by the Garden Technician. Guided tours of the gardens, talks, and demonstrations were continued.

Public Service - Plant identifications were made for the general public and outside agencies such as the Poison Control Centre, the ministries of Environment, Forestry, Agriculture, and Health.

Numerous public talks, field tours, and demonstrations were given throughout the province.

Field Collecting and Research - Dr. Adolf Ceska, newly appointed Auxiliary Curator, worked on cryptogams, Juncaceae, Cyperaceae, Isoetes, Limnanthes, and identification of voucher collections from outside agencies. Extensive collecting over 3,000 specimens was made in the southern Interior, southern Mainland Coast, Vancouver Island, and the Gulf Islands.

The Curator was a member of the Brooks Peninsula expedition, making a complete floristic inventory of the area. Six hundred specimens were collected, and a checklist prepared comprising 300 taxa including one Brooks endemic, seven Queen Charlotte Islands endemics, one Olympic Peninsula endemic, and numerous disjunct species widely separated from their nearest northern or southern populations.

The Associate Curator completed the final drafts of two publications: the aquatic monocotyledons of British Columbia, with illustrations by the author; and a revised edition of the Handbook on the trees and shrubs of the Province, with numerous additional species and new identification keys. Collecting was carried out in the southern Interior and on the coast. Work is well advanced on a new Handbook - the Ranales - the buttercup family and relatives, which is being done jointly with Dr. M. Heimburger.

The Assistant Curator continued work and report writing on the fescue grasses.

Dr. George Douglas, Research Associate, continued work on Compositae. Volume I - Senecioneae, with illustrations by the Botanical Illustrator, was seen through the galley proof stage. Volume II - Astereae is well advanced and will be ready for printing in the coming year. Other projects include a flora of the St. Elias Mts. of British Columbia-Yukon, and a revision of Poa.

Harvey Janszen has published a flora of Mayne Island, and is preparing floras of Galiano, Pender, and Salt Spring Islands.

Dr. Margaret Heimburger, Research Associate, is working on the Ranunculaceae with the Associate Curator.

Dr. Nancy Turner, Research Associate, has completed the Ethnobotany of the Hesquiat with the Curator of Linguistics; and finished the Ethnobotany of the Nitinaht which is to be published jointly with Parks Canada. Two other manuscripts were completed: the Ethnobotany of Kootenai Indians, and Ethnobotany of the Thompson Indians. Work continues on the nutritional content of traditional plant foods of the Indians, and comparison of plant names in different native languages.

ENTOMOLOGY DIVISION

Robert A. Cannings, Curator

General - Some progress was made in meeting the Division's main priorities outlined in 1980. Although staff remained at two - Rob Cannings (Curator) and Brian Ainscough (Assistant Curator) - an active program in and outside the museum continued.

Perhaps least progress was made on the collection itself, the curatorial aspects of sorting, identification and collection organization being hindered by a lack of staff. Nevertheless, the collection was upgraded through donations, new field collections, completed identifications, and reorganization of storage facilities.

Major steps were taken to increase the public profile of entomology in the Museum. Especially significant was the publication of the first two issues of Boreus, the newsletter of the Entomological Society of B.C. Through Boreus, the Division has become a centre for communication in British Columbia entomology. Increased involvement in the activities of the

Entomological Society of British Columbia, the Entomological Society of Canada and the International Society of Odonatology (odonatology, the study of dragonflies, is a major interest of the Curator) has raised the scientific reputation of entomology in the Museum.

Much time and effort went into developing entomology in the Museum's exhibits. Planning the fresh-water exhibit in the main gallery was a major task in 1981. As in 1980, numerous lectures and guided field trips were organized for the public.

A varied selection of research projects complimenting the collection, exhibit and lecture programs continued, with the interdisciplinary expedition to the Brooks Peninsula being a highlight. Publications grew out of several completed projects and other major books and papers remain in preparation. Such publications are a priority; major gaps persist in the entomological literature relevant to British Columbia, especially in popular publications.

The addition of a second office to the Division's floor space was a big boost to both efficiency and morale late in the year. The Division's two curators will now move into separate working areas and the entomology library, once scattered, can then be unified.

Collections - Stress on priorities outlined in 1980 continued. Most effort went into reducing the backlog of old collection material haphazardly stored in Schmitt boxes and ancient cabinet drawers. Much of this was sorted and transferred to the main collection cabinets. In conjunction with this work, collection cabinets were brought into full use. Thirty specimen drawers were built by the Exhibit Division workshop to fill empty cabinets, and all specimen drawers now contain their full compliment of pinning trays. The replacement of old, inefficient storage cabinets is an important but expensive procedure which will take many years to complete.

Because of this consolidation of specimens, large numbers of specimens were not transferred from the University of British Columbia collection this year, even though some duplicate material of Coleoptera, Hemiptera, Hymenoptera and Lepidoptera is still to be deposited at the British Columbia Provincial Museum. The last of the specimens donated by the British Columbia Ministry of Agriculture (Summerland) was incorporated into the collection (much of the donation arrived in 1980). These specimens are of great historical interest and add to our rather small amount of material from the interior of the Province. Important collections by the pioneer entomologists Treherne, Buckell, Ruhmann and others are included. Many of the specimens are identified - another bonus!

Seventeen specimen loans were made in 1981, resulting in the identification of a number of taxa in the collection. All our Tabanidae (horse flies) are now idenitified as are small collections of Trichoptera (caddisflies), Philanthidae (digger wasps) and Silphidae (carrion beetles).

Field trips produced several large collections that remain incompletely sorted and identified. Approximately 1500 specimens were collected along the Alaska Highway and in the Atlin region, 1000 on the Queen Charlotte Islands (especially Anthony Island) and 1000 in the South Okanagan. On the two-week Brooks Peninsula expedition, about 3400 specimens were collected, consisting of 1700 pinned, 1500 in alcohol and 200 dragonflies in cellophane envelopes. Of these, the dragonflies, mosquitoes, horse flies, spiders and some beetles and true bugs have been identified in preparation for the final report on the project. Entomological specimens from the Brooks Peninsula will be divided between the British Columbia Provincial Museum and University of British Columbia, the two participating institutions in entomological research.

The 1980 summer research into the invertebrates of the Qualicum River estuary (organized by the Canadian Wildlife Service) produced several hundred vials of insect specimens. These specimens were delivered to the British Columbia Provincial Museum in 1981 and will be deposited here after they are identified.

In conjunction with a research project on the Asilidae (robber flies) of British Columbia, Rob Cannings received donations from several individuals. Especially noteworthy were those from James Grant (112 specimens) and J. L. Carr (246 specimens).

George Doerksen, a prolific contributor of specimens, data and insect photographs to this Division, was killed by a grizzly bear in late July while photographing dragonflies at Liard River Hotsprings. This is a great loss to British Columbia entomology and this Division. The Doerksen family has very kindly donated George's slide collection and field notebooks to the Museum for future use in lectures, displays and publications.

Research and Fieldwork - For Rob Cannings, the time available for research (aside from field collecting) was minimal, but several projects were undertaken. A study of the effects of the parasitic blowfly Protocalliphora on Barn Swallow nestlings was begun with Neil Dawe of the Canadian Wildlife Service at Qualicum Beach. Fieldwork on this project will continue into 1982.

A taxonomic and distributional study of the robber flies of British Columbia was well underway, with the examination of specimens in all other major British Columbia collections complete. Material in the Canadian National Collection will be attacked in 1982. Although the project appeared straightforward when it was begun, as usual it has deepened into a complex story of incomplete taxonomy and difficult identifications.

Work continued on the attempt to distinguish the larvae of the Canadian species of Ischnura, a large and difficult genus of damselflies. Production of usable keys for this purpose will contribute to the success of aquatic surveys.

The Mantispidae (mantisflies) are a group of interesting but little-known neuropterans. Only four or five species are known from Canada. Rob Cannings and Syd Cannings (University of British Columbia) forged ahead on a distributional study of the Canadian species, but with difficulties in the identification of some species, the project has widened to include some taxonomic review.

Rob Cannings is the British Columbia representative on the Canadian Grasslands committee of the Biological Survey of Canada (Terrestrial Arthropods), and his duties took him into the Okanagan to examine and collect insects at sites representative of this province's grasslands. The project is intended to gather data on grassland insect fauna in representative locations over a long period. Work in the Osoyoos area is a priority since the site is unique to Canada (in its representation of certain Great Basin animals) and is in some danger of being irrevocably altered. A preliminary report on the project was presented at the annual meeting of the Entomological Society of Canada in Banff in October.

Research into the behaviour of the little-known dragonfly Aeshna sitchensis in the bogs of the Brooks Peninsula was completed during that expedition in early August. A manuscript was written in the autumn.

Rob Cannings assisted other researchers by identifying invertebrates in the guts of insectivorous Saw-whet Owls from the Queen Charlotte Islands for Spencer Sealy (University of Manitoba) and insects eaten by sculpins from the Flathead River for Aquatic Zoology Division.

Brian Ainscough worked on his revision of the tortoise mite genus Polyaspinus but did not complete the project.

Fieldwork occupied much of Rob Cannings' summer (Brian Ainscough was on medical leave). The four major field trips were as follows: the grasslands study trip to Osoyoos in July; the journey with a University of British Columbia crew, along the Alaska Highway to the southern Yukon, Atlin and Haines Road regions in May and early June; the Anthony Island trip with a British Columbia Provincial Museum conservation and archaeology team in June; and the interdisciplinary Brooks Peninsula expedition in August. A highlight of the Alaska Highway trip was the intensive collecting in and around the unique warm pools at Liard River Hotsprings. At Anthony Island, aside from general collecting at this remote and fascinating spot, examination of invertebrate damage to the old Haida totem poles and participation in the archaeological dig were experiences to remember. The Brooks Peninsula expedition was, of course, memorable in its concept and exciting in its social aspects and stress on interdisciplinary research.

Publications - Peter Belton of Simon Fraser University completed his manuscript on the Mosquitoes of British Columbia to be published as a Museum Handbook. The volume is now being edited and will appear on the bookshelves in 1983. It will be an interesting and useful contribution to this province's entomological literature.

Jon Shepard of Nelson continued his work on the handbook to British Columbia butterflies.

Rob Cannings became editor of the Entomological Society of B.C. (ESBC) newsletter early in 1981. With the encouragement of the Society he transformed the newsletter into Boreus, an ambitious attempt at increasing Society membership (especially among amateurs) and improving communication among the province's entomologists. The newsletter title, Boreus, refers to Boreus elegans, the provincial insect chosen by the ESBC as its logo. Species of Boreus are

snow scorpionflies - fascinating wingless insects that hop over winter snow in the mountains of the province. With the first two issues of Boreus, society membership increased by 30. The advent of Boreus has strengthened the Museum's position as a clearing house for entomological information.

Exhibits - The soil diorama neared completion in 1981. All models were finished and installed despite some tricky casting and painting problems that had to be overcome. The floor plan and diorama layout of the fresh-water exhibit on 2M in the main exhibit building were modified and completed. A number of models of dragonfly larvae for the underwater pond diorama in this exhibit were sculpted. A planned display on British Columbia dragonflies originally intended for the museum train, now cancelled, was revived and redesigned as a travelling exhibit.

Public Relations - Rob Cannings gave talks on entomological topics to various naturalist societies and other interested gatherings including the British Columbia Provincial Museum Natural History Curators Group, the South Okanagan Naturalists Club, the Bulkley Valley Field Naturalists and the Museum's docents. He addressed the annual banquet of the Nanaimo Field Naturalists Club and led a tour of the Entomology Division for interested members of the Victoria Natural History Society. Day field trips for the Cowichan Field Naturalists and the Victoria Naturalists were very successful. Brian Ainscough spoke on the ecology of soil fauna to the Natural History Curators Group.

Rob Cannings attended the annual meeting of the Entomological Society of B.C. in Vancouver in September and participated in a symposium on entomology in British Columbia, giving a lecture on the role of the Entomology Division at the Museum. In October he visited Banff for the Entomological Society of Canada annual meeting and as the British Columbia representative on the Grassland Committee of the Biological Survey of Canada he outlined his progress on this work.

ETHNOLOGY DIVISION

Peter L. Macnair, Curator

A highlight of the year was the opening of several major exhibits relating to the Division's interests. Most significant was the permanent display of argillite carvings. These intriguing works include pipes, bowls, totem poles, plates, and figure groups carved by Haida Indians from a soft carbonaceous shale found on the Queen Charlotte Islands. The core of the collection is seen in 111 sculptures generously donated to the Museum by the Vancouver connoisseurs of the art, Mr. and Mrs. Francis C. Reif. The Museum is most grateful for this major gift which brings to British Columbia the most comprehensive private collection of argillite known.

In November, the internationally acclaimed exhibit The Legacy opened to its first North American showing at the Museum of Anthropology on the University of British Columbia campus. In 1980 this exhibit, containing some of the finest contemporary and traditional Northwest Coast Indian art, was featured at the Edinburgh International Festival. Opening ceremonies were attended by dance performances staged by Haida, Westcoast and Kwakiutl people. The exhibit was well mounted in the Museum of Anthropology and displayed in sympathetic surroundings. Thanks are offered here to the staff of that institution and to the participating artists; the participation of both contributed to the success of the exhibition.

Also in November, the museum hosted a travelling exhibit created by the National Museum of Man, Ottawa, entitled The Hunt Family Heritage. Featured were original paintings, silkscreen prints and some carvings created by members of the Hunt Family, Kwakiutl artists who have made a major contribution to contemporary Northwest Coast Indian art and its revival over the past 30 years. More than 400 guests crowded into the ceremonial house of the late Chief Mungo Martin, located beside the Museum, to witness traditional songs and dances

The Legacy at the Museum of Anthropology,
University of British Columbia

belonging to the Hunt family. Following the dance, visitors proceeded to the Museum to enjoy the display.

Ongoing research was conducted by various members of staff. This included the detailed recording of Kwakiutl, Haida and Westcoast potlatches. In many cases contemporary objects from the "potlatch use collection" were loaned to individuals for use in the ceremonials. Museum carvers Richard Hunt and Tim Paul added to the collection of rattles, masks and other objects that are made available to those who wish to borrow them for display at potlatches.

Other field research included work with Tahltan informants on life histories, the annual round, and native economics. Similar work was conducted among the Ehatisat and Nuchatlaht groups.

More than 30 public lectures were given by staff on subjects ranging from art, tribal society, through to the use and significance of ethnohistoric photographs. A number of lecture tours were given to areas of the Province, including the Queen Charlotte Islands and

Northern Vancouver Island. Staff participated in a number of meetings of the Anthony Island Task Force, a group studying the best means to preserve and maintain an important stand of totem poles at the remote Haida village of Skungwai. One on-site trip was made during the summer to assist with continuing research into the poles that remain standing.

A trip to the Kyuquot area of Vancouver Island's west coast was made to salvage an unfinished dugout canoe discovered during logging operations. While a number of such canoes have been discovered over the years, few have been preserved or salvaged, meaning that this example is important as a study and reference piece. Title to the canoe remains vested in the Kyuquot Band, within whose traditional territory the canoe was discovered. Salvage was provided by Crown Zellerbach and their considerable assistance in this matter is greatly appreciated.

Late in the year construction finally began on the new carver's workshop to replace the original destroyed in a sudden fire in the summer of 1980. Hopefully the carvers will move into their new premises, constructed in the form of a traditional Haida house, before summer of 1982. Because the carvers, Richard Hunt and Tim Paul, had no workspace in which they could carve poles, they spent three months in Vancouver carving a pole outside the Canadian Broadcasting Corporation which in time will be erected on the Corporation grounds. During the late summer the totem poles in Thunderbird Park were repainted, considerably enhancing the look of the park.

A number of loans were made during the year. Notable among these were a wooden screen carved by Haida artist Bill Reid which was sent to an exhibit in Kansas, drawings attributed to Tom Price sent to the Queen Charlotte Islands Museum, and a selection of contemporary silkscreen prints to the Madrona Exposition Centre in Nanaimo.

Major accomplishments were achieved in the area of collections maintenance and storage. Conversion to acid-free storage envelopes will insure protection for the thousands of photographs and negatives held by the Division. Mobile compacting storage units were installed, increasing storage for artifacts by almost 50 per cent. Improvements in textile storage units have quadrupled the capacity for holding ceremonial blankets and other objects of cloth.

The collection grew somewhat more slowly this year but an important Coast Salish ceremonial rattle made of Mountain Sheep horn was acquired through monies provided by the federal Secretary of State. The Friends of the Provincial Museum (FOPM) purchased a Haida wooden panel pipe, one of only 30 known in museum collections and only the second to be repatriated to this country. Additionally, the FOPM provided funds for the purchase of more than 50 pieces of contemporary Westcoast (Nootka) basketry. With this collection, most of the Westcoast basket makers now practicing are represented in the collection. The Division is indeed grateful to the Friends for their continuing interest and support.

As well as the assistance from the above, a number of citizens were generous enough to donate items to the collections. Donors include: Open Pacific Graphics, a silkscreen print; Potlatch Arts, 17 silkscreen prints; Mr. and Mrs. J. Underhill, a Haida style food dish; David Roels, a Frank Charlie painting; Hudson W. Black, a Tsimshian model pole; Tim Paul, 2 silkscreen prints; Chris Nancarrow, a pair of Interior Salish moccasins; Mr. Ralph Dent, 2 Westcoast mats; Mrs. F. M. Shandley, a silver bracelet; Mrs. M. Nation, a Coast Salish basket and lid; Howard Roloff, a Haida beaded eagle headdress; P. L. Macnair, a basket of potlatch presents; Mr. James M. Mathews, a Salish coiled berry basket; Nova Scotia Museum, 3 Northwest Coast fish hooks (permanent loan); Mrs. C. S. Thicke, a carved, ivory cigarette holder; Mr. Tom Hodgins, 56 photographs, 3 Westcoast basketry items, a plaque and a book; Mr. Jim Adkins, a carved and painted model pole; Robert Davidson, a silkscreen print; Mrs. Ackerman, 2 coiled Shuswap baskets and 2 coiled Shuswap trays; and Marion Heritage, a Westcoast model shopping basket.

LINGUISTICS DIVISION

Barbara Efrat, Curator

In 1981 the Division made significant progress in its efforts to preserve native language data, to encourage needed original research into these interesting and unique languages by staff and outside contract scholars, and to share information on these languages with the public through exhibits, talks, learned papers, and publications. Areas of special note include:

Contract Programs - The Division continued its program of contracting with expert linguists to research the native languages of British Columbia with emphasis on those languages which have been little studied. To that end, Professor Patricia Shaw of the University of British Columbia accepted a contract to work on Tahltan, an Athabaskan language in the northern part of the province. Her research yielded the first Tahltan language data - taped, transcribed, and translated - in the Division's collection. Other contracts augmented the tape and document holdings in Chilcotin and Tagish (both of the Athabaskan family of languages), and in Halkomelem, Sechelt, Comox, and Okanagan (all of the Salishan family).

For its projected series of basic reference grammars of British Columbia native languages, the Division contracted with Professor Anthony Mattina, University of Montana, to write a grammar of Okanagan, an Interior Salish language spoken in both Canada and the United States. The Division has already received its first finished manuscript for the series - a grammar of Thompson, another Interior Salish language, written by Laurence and M. Terry Thompson of the University of Hawaii.

Donations increased the collection of data in Gitksan (Tsimshian), Shuswap (Salishan), Bella Coola (Salishan), Twana (a Salishan language of Washington State), Kwakwala (Wakashan), Straits Salish, and Heiltsuk (Wakashan). These materials include major collections of Kwakwala tapes donated by the Campbell River School District and of Heiltsuk tapes given by the Owikeno Language Project.

In total, 233 tapes were added to the collection, plus field notes for many of them.

Exhibits - The Division's mini-display Our Native Languages continued to circulate in the province. Work commenced on a new travelling exhibit Language: the Great Game.

Curriculum Collection - The Division's sizable curriculum collection, containing samples of native Indian and Inuit pedagogical materials from Canada and the United States, was carefully reviewed, and the file records checked for discrepancies and errors.

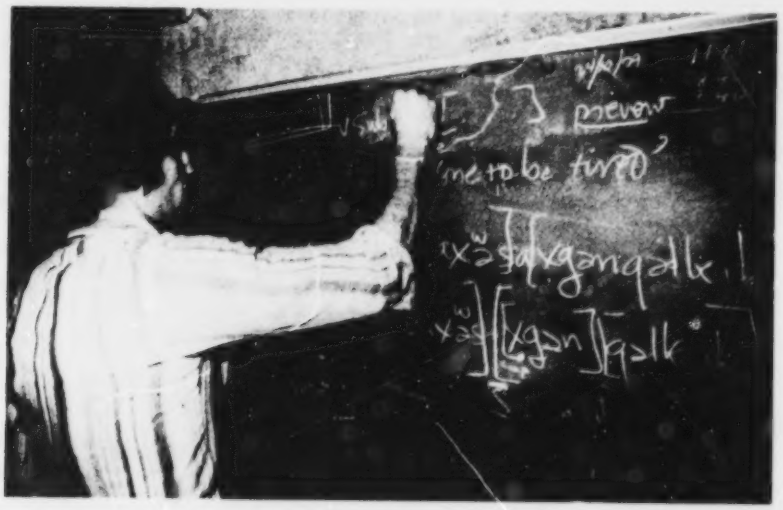
Public Presentations - Dr. Barbara Efrat was invited by the Danforth Foundation to present several linguistic workshops at the Northwest Regional Conference of Danforth Associates at Warm Springs, Oregon. As well, Dr. Efrat participated in and chaired sessions of the Second Working Conference on Central Coast Salishan Languages, hosted by the Division and organized by Dr. Robert Levine who also chaired several sessions.

Dr. Robert Levine presented a paper Lexicalism, Basic Rules and Movement Rules in Kwakwala at the Conference on Syntax of Native American Languages at the University of Calgary. As well, Dr. Levine lectured to students and faculty on topics in Wakashan and Salishan linguistics at the University of California (Santa Barbara). In November, Dr. Levine gave a series of four public lectures on Communication in the Newcombe Auditorium of the museum.

Research - Dr. Barbara Efrat continued her work on selected topics in Northern Nootkan linguistics, while Dr. Robert Levine concentrated on research into areas of Kwakwala syntax.

Other Activities - Dr. Barbara Efrat was elected to the executive council of the British Columbia Museums Association for the term 1981-82 and appointed by the Canadian Museums Association to an ad hoc committee to advise on a Museum Salary Review Study. Dr. Robert Levine was appointed Adjunct Associate Professor at the University of Victoria.

Both curators acted as outside referees for applications for funding made to a number of granting agencies in both Canada and the United States. Dr. Levine was the external examiner for a University of Victoria dissertation on the Kyuquot dialect of Northern Nootkan. As a trustee of the Melville Jacobs Collection held at the University of Washington, Dr. Efrat evaluated a number of requests for access to that collection.



Robert D. Levine, associate curator of Linguistics, B.C.P.M.

MODERN HISTORY DIVISION

Daniel T. Gallacher, Curator

Emphasis by the Division's curators and technicians was on acquisitions, collections management, and temporary exhibits. Considerable efforts were also made in publications, conference papers, and public lectures. Among the year's highlights were acquisition of the entire contents of both the Manhattan Hat Company shop (Vancouver) and the Man Yuck Tong retail herbalist (Victoria) as study collections. Also acquired was the W. Tomes' (Victoria) shoemakers' tools, equipment, and materials from a family holding.

Less singular but equally significant were accessions resulting from staff field work aimed at surveying and preserving objects, drawings, and records of various industrial concerns that were either closing down or re-tooling to modern operations. Among these were Alberni Pacific (Macmillan-Bloedel, Port Alberni, established c1908), Hammond Division (B.C. Forest Products, Port Hammond, c1910), Port Mellon Pulp and Paper Ltd. (1912), Smith Cedar Products (Victoria, c1920), Ramsey and Hafer Ltd. (Victoria, 1898), Sweeney's Cooperage (Vancouver, 1890s), Progressive Engineering (Vancouver, 1905), Benson's Shipyard (New Westminster, 1908), and Alberta Lumber Co. (Vancouver, 1900). Further accessions in this vein included pipe-fitters' tools (James Hare, CNR shops Port Mann, 1930's-40's) and foundry molders' tools (David Griffiths, Victoria, 1920-69). Such surveys and acquisitions are designed to be a data base for research on British Columbia's historical capacity for industrial innovation and adaptation of foreign technology as well as to provide a sizable holding suitable for site reconstructions and other forms of display.

Other important collections work included major improvements in the storage efficiency for costumes and textiles, designed by Zane Lewis, in collections handling procedures, and

in the layout of the Viewfield Road warehouse where better space utilization was achieved and many unaccessioned items believed either redundant or useless to the Museum's purposes were removed to Crown Assets Disposal.

Of special note is the joint research project between the History Division, National Museum of Man, and this Division in collections planning, conducted here during the summer. Led by Barbara Riley of the National Museum of Man, a team of experts and trainees focused upon early twentieth-century kitchen technology in British Columbia by employing direct contact survey techniques supported by collections and archival research. A report on this project currently is being prepared by Riley and her associates in Ottawa.

Our co-operation and advice was sought by various institutions throughout the year, chiefly in the forms of collections loans, training, and consultations. Some stand out, including on-site advice to the Inuit Cultural Institute (Eskimo Point, NWT), the British Columbia Forest Museum (Duncan) in its exhibit upgrading programme, and B.C. Coal Ltd. (Sparwood) as that firm seeks to inventory and conserve its artifacts for display in a company museum.

Publishing - Curators and technicians continued to publish both scholarly and popular studies through a variety of outlets. Worth noting especially is James Wardrop's guest editorship for a forthcoming issue of Material History Bulletin devoted solely to studies in Canada's forest industry history. Several members of the Division contributed articles to this project. Robert Turner had published (from a privately produced manuscript) another book in his series of British Columbia transportation history. This volume, The Pacific Empresses, enjoyed good reviews and clearly is the definitive account of a major element in Canada's maritime past.

Both curators and technicians were prominent organizers or speakers in a wide range of regional, national, and international conferences. Commentary, or a paper, was presented by the Division's staff member at the Pacific Northwest History conference, the Pacific Northwest Labour History conference, the Canadian Museums Association annual meeting, the bi-annual B.C. Studies conference, and the History of Science and Technology in Canada seminar. Additionally, staff were active as speakers for the Newcombe lecture series, the Fort Steele winter series, several museum advisors' training workshops, and on one occasion in Toronto where Virginia Careless (on holiday there) delivered a light-hearted though scholarly talk entited Just-Desserts, an account of earlier Christmas menus.

Exhibit work is a much-liked and much-pursued activity of the Division. In 1981 three temporary displays - Capital Curios: Antiques, Oddities, and Curiosities, First Alarm! A History of Firefighting in British Columbia, 1850's-1890's, and more ambitious yet, Woodworkers' Art were planned and erected during the year. Additionally, significant revisions and upgradings were performed on the permanent galleries with the gold rush, maritime, coal mining, logging, and new acquisitions showcases receiving most attention.

Transport Collection - Located in Richmond, the former Transportation Museum has emerged, (following adoption in 1980), as the Transport Collection of the British Columbia Provincial Museum. This new name was entered in the Vancouver-Richmond Yellow Pages for 1982. And a new sign, gold on blue, has been mounted on the corner of the building facing the Bridgeport-Viking Way intersection.

The 2.3 man-years of work time allocated to the Transport Collection in 1981 went almost entirely into restoring vintage vehicles and guiding visitors through the growing display. The two mechanics completely restored a First World War-vintage FWD truck, which had been used subsequently by the B.C. Electric to carry coke and to clear snow from Vancouver's streetcar tracks. To complement that exhibit, Transport Collection staff are currently rebuilding one of Victoria's Birney-type streetcars.

During 1981, visitors from every continent except Africa came to see the Transport Collection. Staff gave nearly 1000 individual guided tours, and over 40 tours to school, pre-school, and adult groups. In addition, the staff twice gave up weekend days off to open the Collection to regional vintage car meets.

Much of the expenditure for 1981 was for new tools and machinery to replace those worn out or owned privately by the mechanics. By contrast, the largest bloc of funds for 1982 is earmarked for upgrading the quality of display.

VERTEBRATE ZOOLOGY DIVISION

Edward H. Miller, Curator

This Division began its first full year with two new curators, Drs. E. H. Miller and A. S. Harestad, and a new technician, Mr. J. M. Cooper. The aims and philosophy of the Division were thus subject to intensive sorting in 1981, and led to formulating certain specific programs for collecting and research.

Among them the obvious responsibilities were to increase study and collection of small mammals in the southern parts of the Province, in areas where logging, land development, and urbanization are rapidly taking place. Field work was thus carried out near Abbotsford in the spring, primarily to collect moles, voles and shrews. Later, collecting was extended to near Oliver for small terrestrial mammals and for bats. There, several staff members also received instruction in bat collecting techniques from Dr. Brock Fenton (Carleton University). Other field work was carried out in keeping with a growing emphasis on marine mammal specimens by salvaging dead killer whales, porpoises, sea-lions, and Harbor Seals. A finding of major significance was the first British Columbia record for a small species of sperm whale, Kogia simus. A single, illegally killed specimen of the rare Vancouver Island Marmot was also obtained. Two other important specimens were obtained: Canada's first specimen of the Spotted Bat (Euderma maculatum), a gift from Dr. Fenton; and British Columbia's first record of the Tundra Shrew (Sorex tundrensis), on exchange from the Royal Ontario Museum.

To minimize the necessity of the Museum collecting specimens directly, efforts were made to strengthen contacts with other government agencies and some private individuals, to acquire specimens found dead, road kills, confiscated specimens, etc. These contacts yielded valuable specimens, including a Mountain Caribou, many small birds, wolves, cougars, and others. We also initiated a program, through Mr. Barry Saunders (Fish and Wildlife), to solicit important specimens from trappers throughout the Province.

During 1981, reorganization of most of the collections was completed, numerous back-logged specimens were prepared and accessioned, and a dermestid colony for cleaning small skeletons was established. Many new and significant records were added to the photographic collections, including Spoon-billed Sandpiper, Common Gallinule, Smew, Spotted Redshank and California Nightsnake.

Research projects continued on variation in the skulls and teeth of seals and related carnivores. This project should shed light on questions about how variation within species varies according to sex and age, and what the possible significance of such variation is. The compilation of distributional and breeding information on the higher vertebrates of British Columbia based on reliable sightings, photographs, and museum specimens, continued. These data will eventually be plotted on maps, one for each species. A research project on seabird populations and colony locations around southern Vancouver Island was completed, and work on the evolutionary relationships of sandpiper species, based on characteristics of voice, progressed well. A new study of geographic variation in a species of curlew was started, and a student at the University of Victoria, in conjunction with this Division, began a Master's thesis dealing with geographic variation in egg size and patterns. Information on the Dwarf Sperm Whale was summarized, and is being prepared for publication.

Publications and reports prepared by curatorial staff covered topics from natural history to computer analysis. The Curator completed co-editing a volume to be published in 1982, Acoustic Communication in Birds, and also finished some shorter papers.

Numerous mounts were prepared by the taxidermist, some for imminent displays, and some in long-term planning for a synoptic display of British Columbia birds and mammals. A technician, Phil Nott, coordinated the organization and repair of the Education Collection and added many new specimens to it with the help of some volunteers. This collection received heavy use over the year by teachers, students, and artists.

Many volunteers contributed to curation and research projects in the Division over the year. Some mounted birds and mammals or prepared research specimens; others helped with data collection and collation (after measuring things from seal jaws to weasel feet); yet others transcribed notes from various sources for data files. Dr. J. Hamilton assisted in several

research projects, and did autopsies on several important specimens including an unusual caribou, the Dwarf Sperm Whale and the Vancouver Island Marmot.

Technician Elizabeth Taylor numbering Glaucous-winged Gull eggs as part of a study of seabird ecology

CONSERVATION DIVISION

Richard Renshaw-Beauchamp, Chief

This year has been one of intense frustration for the Division and one in which we have made significant advances. The frustration has come from being unable to fulfill the basic requirement of preventative conservation by providing a stable environment for collections and exhibits, and the advance has been to acquire additional space - the former office of the Museums Advisor - for a proper textile conservation and conservation analysts laboratory. Several divisions, on our recommendation, have bought carts for transporting small objects and Conservation gave each of the human history divisions two baskets each as Christmas presents to encourage them to handle artifacts carefully.

We wish to thank the Director once again for assisting us to host the 7th Annual Conference of the Canadian group of the International Institute for Conservation, the first time the conference has been held outside of Ontario and Quebec.

1981 is the first year in which the Division has worked on artifacts of the Modern History Division other than textiles, and indeed about 50 per cent of our laboratory work on artifacts this year has been devoted to historic objects.

The Division, in conjunction with Greg Evans and the British Columbia Museums Association, has given ten workshops for groups from small museums around the Province.

To protect the Cranbrook petroglyph site from further vandalism, the Division advised that the site be buried. This was done. The Division also advised Heritage Conservation on methods for protecting the Harewood Plains panels from vandalism.

The Chief Conservator was a member of the Anthony Island Task Force and helped draft the successful World Heritage Site application. Work on the poles and associated features at this site was done in the summer and will be continued in 1982.

Significant inroads are being made into the massive task of correcting the ethnology catalogue of artifacts to produce a scientifically correct one. It should be finished in 1985.

1981 was in a way the end of an era for the Division. Christine Nancarrow left us to become a full-time artist. As an outstanding conservator of textiles and an unforgettable character she will always be missed, however, we were more than fortunate to be looking for a replacement just at the time Colleen Wilson was looking for a job in western Canada. Ms. Wilson was a distinguished student at the Hampton Court Centre for Textile Conservation in England and afterwards instructed there. She is a native of Victoria, British Columbia.

This has been a year of philosophical as well as physical change which has kept the Division alive and staff questioning.

Research continues in the areas of stabilization of waterlogged wood, non destructive methods for determining the soundness of wood, and the toxicity and safe handling of fumigation and fumigants.

EDUCATION DIVISION

Shirley Cuthbertson, Chief

The number of people participating in public programs dropped this year from 63,000 to 49,000 because we had no funding for summer tour guides. However, teaching programs maintained previous levels and our Docents increased their contribution by providing 15,000 hours of volunteer time, teaching classes, acting as tour guides or as roving interpreters in the permanent galleries. They conducted guided tours for such distinguished visitors as the Swedish Consul and the French Ambassador, and for groups from Portland, San Diego, Newfoundland, Thunder Bay, Whatcom, Quebec, Le Pas, Los Angeles, Issaquah and Dusseldorf.

The weekend program of family workshops, in which parents accompany their children, was an outstanding success. Nearly every session was heavily overbooked and waiting lists had to be maintained. The subjects ranged from Know your Silver, Intertidal Life and Lacemaking to Mineral Collecting.

An innovation this year for visitor services was the installation of an information desk manned by Docents. The desk is placed near the foot of the down escalator and provides an admirable opportunity for visitors to ask questions after they have toured the galleries.

Mrs. Joyce Larkey, volunteer docent, with a class on cedar in the Ethnology Gallery

Docent tour guides conducted the wives of the provincial premiers through the galleries, one of whom remarked that it was much more interesting than listening to their husbands debate.

The travelling exhibit program functioned at a reduced level. Nine exhibits from the British Columbia Provincial Museum and six from the National Museums of Canada circulated to 22 community museums throughout the Province. Four exhibits travelled outside the province, one to each of Edinburgh, Chicago, Newfoundland and Manitoba.

A new and larger exhibits truck was acquired which, after some modifications to the climate control system, is now functioning efficiently. Unfortunately, our staff driver suffered a severe whiplash injury when the truck was struck by a semi-trailer near Smithers.

It was a busy year for temporary exhibits. A total of nine were displayed.

The variety of in-house services offered by the Division ranged from the layout and typesetting of the Friends of the Provincial Museum Newsletter to the co-ordination of the activities celebrating International Museums Day; from the editing and preparation of newspaper articles for publication to the organization of opening ceremonies for temporary exhibits.

With Associate Museum funding, the Division co-ordinated an active curatorial extension program, involving lectures and workshops conducted by members of nearly every division, in locations throughout the Province.

Members of the Division pursued professional development in such diverse locations as the ICOM/CECA Conference in Denmark, the Canadian Museums Association Conference in Boston and the Science Congress in Vancouver. Some ten papers and articles were published during the year.

Some facts in brief on selected activities follow:

Statistics (in-museum programs)	Attendance
Staff specials/workshops	1,636
School activity programs	20,960
Adult group tours (docents)	923
Unguided group visits	22,263
Summer tour guides (2 French, 1 English)	2,489
Family/adult programs	763
Total:	49,034

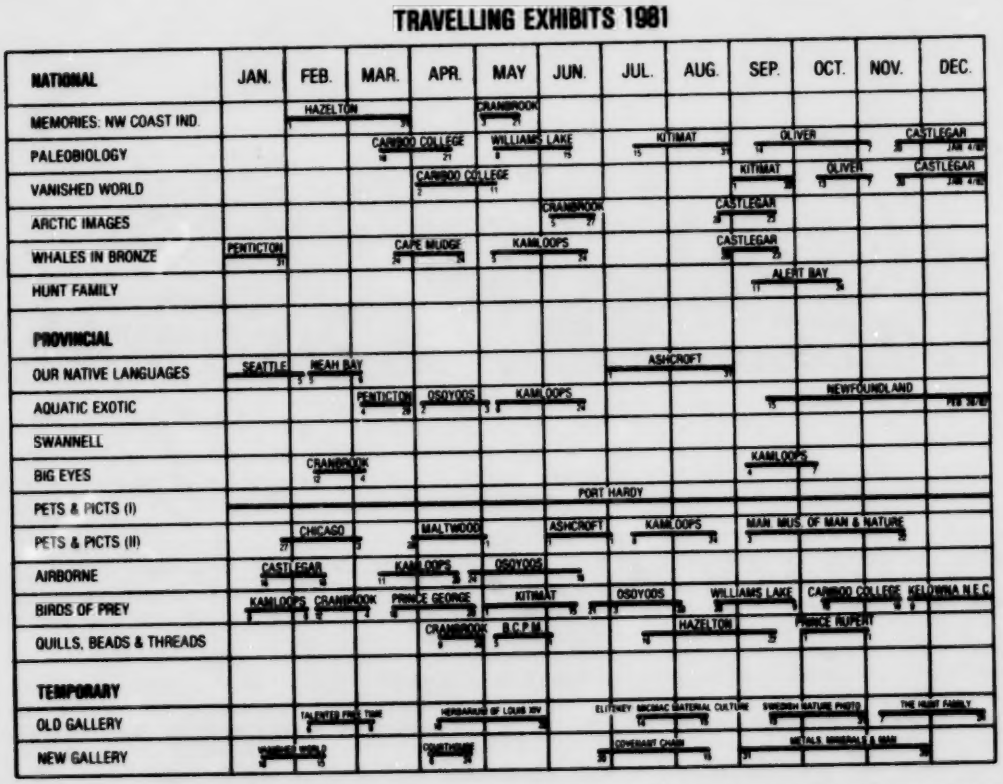


Table III. Travelling exhibits moved by the museum in 1981, and exhibits shown temporarily in-house. Exhibits listed as National were produced by the National Museums of Canada; those marked Provincial were produced by British Columbia Provincial Museum. The bars (labelled with names of towns and cities) show plans for the year for delivering and removing displays using British Columbia Provincial Museum staff and vehicles.

School Programs

Spring section of 80/81 + fall section of 81/82 = 750 hours of scheduled programs

Teacher Training

Four, one-day, in-service workshops and four lecture/workshops for University of Victoria education students (including French Immersion Teacher class); one seminar at National Science Teachers Association conference; one introductory planning session with Victoria Native Indian teachers; two Art Teachers seminars; five seminar/tours for Seattle teachers.

Docents: Hours 15,000 (1980:9504)

Training: 106+ hours (20 curators gave 32 sessions, four Education staff gave 54).

EXHIBITS DIVISION

Alec James, Chief

This year, the highlight for the Division was undoubtedly the opening of the Argillite Gallery. The design by Tom Putnam of our staff was awarded an "Honorable Mention" by Interior Design Magazine and the Institute of Business Designers.

Perhaps the low point of the year was our frustration while attempting to solve the asbestos problem. The presence of this carcinogen has curtailed progress on the next phase of the Natural History Exhibit. Part of the discussions with British Columbia Buildings Corporation regarding the asbestos problem involved the production of a multi-projector slide show clearly identifying the problem. This show, which was seen by senior management of the Ministry and BCBC, was positively received by everyone.

Earlier in the year, BCBC also contracted a ventilation study and, as suspected, many areas of the building are below acceptable standards. It was partly this ventilation problem that necessitated the move of the Exhibit Design offices from the basement to the former board room. This move, to a well-lit and well-ventilated space, resulted in a major boost to morale. The Division carpenter built a new and smaller board room in the Newcombe lobby.

Considerable progress was made in the design of the Underwater Exhibit and the Fresh-water Exhibit. A model of the Underwater Exhibit was built, which assisted greatly in the design phase. On March 5, Jean Andre, the Head of Design and the Designer of this exhibit, gave a slide presentation to the Division staff to explain what he was proposing. This generated considerable enthusiasm to start the projecr. Unfortunately, the presence of asbestos eliminated this possibility.

In the Modern History Exhibit, a major temporary exhibit was installed in the Capital Curios gallery. Titled Antique, Oddities and Curiosities," this proved to be very popular.

In the Gold Rush diorama, the waterwheel which had been running since 1971 had to be rebuilt. At the same time, the entire foreground was rebuilt in preparation for repainting the background in 1982.

The Coast Forest diorama, which is now two years old, underwent some upgrading and repair work including the replacement of some of the botanical and foreground material. This same exhibit was part of a visitor testing study undertaken by Bob Peart. The results of this study proved to be very useful and will, no doubt, be used by other institutions.

The In the Soil exhibit was sufficiently complete to open to the public when the

visitor-testing study was finished.

During the year, the Public Broadcasting System television network affiliate in Spokane came to make a film in the Modern History gallery. This film, Rails, Rocks and Rangeland, includes several members of the Division staff.

In the Archaeology Exhibit, a new section of a dig from Gore Creek area in the Interior was installed to replace the Mayne Island section.

New audio/visual shows were produced for: the Argillite Exhibit, the entrance to the Archaeology Exhibit, the Airborne travelling Exhibit, and the asbestos problem.

On June 23, Alec James was invited by the Whatcom County Museum to speak at the Waterfront Revival Conference in Bellingham. Earlier in the year, Stuart Stark held an Exhibits seminar at the Forest Museum in Duncan.

Awards won by Exhibits staff during 1981 included the following: Tom Putnam - Institute of Business Designer and Interior Design Magazine, for the design of the Argillite Gallery; Rennie Knowlton - Print Magazine award for the cover design of The Legacy catalogue; Roy Harris - Print Magazine award for the design of The Legacy exhibit.

FRIENDS OF THE PROVINCIAL MUSEUM

President's Report for 1981

This, the eleventh year in the life of the Friends of the Provincial Museum, passed comfortably. No one event stood out to give reason for applause nor has any difficulty arisen which has proved insurmountable.

Eleven committees involving 23 persons have covered the commitments and responsibilities of the Friends and the reports of the chairpersons testify to the capable execution of all society matters.

The Executive Committee, which includes the six elected officers, the editor of Discovery, one member by appointment and the immediate past-president, has met ten times.

The Board of Directors, which includes ten members elected from the individual membership, one member by appointment and 15 representatives of the member societies, for a total of 26, has met eight times.

The Vancouver Island Philatelic Society has withdrawn membership so reducing the number of Directors to 25, and the number of Member Societies to 14.

William D. Barkley, Assistant Director, was advisor to the Friends during 1981-82. While regretting the loss of contact with the Director, the change of leadership has allowed for fresh insights.

The Museum Gift Shop is to be congratulated on its eleventh year of successful operation. Profits continue to escalate and the general tone of the shop is one of optimism. The amount of $250,000.00 was made available to the Museum to finance selected projects. Members of the Executive Committee assisted in the shop with the annual stock-taking on Friday, January 8, 1982. Mr. Alistair Murdoch of Thorne Riddell, Chartered Accountants, conducted a spot check. The terms of reference, in so far as the operation of the Museum Gift Shop is concerned, are presently under consideration and a written policy regarding the relationship between the Friends and the staff and management of the Museum Gift Shop is soon to be established. A committee of three executive members, with Bill Barkley, is at this time engaged in the task.

From the annual total of $50,000 allotted and with the joint approval of the Director of the British Columbia Provincial Museum and the President of the Friends, purchases made in the past year from the Rare Objects Fund (Project #81-190) have included for the Ethnology Division: 1 mountain-goat mask, 1 ceremonial mask, 3 Hamatsa whistles, 1 whistle for a mountain-goat mask, 9 Westcoast Indian baskets, 2 Haida goat-horn spoons, 1 Haida shark mask, 1 Haida panel pipe, 1 silver lighter, engraved by Bill Reid, Haida artist and carver; for the Modern History Division: 1 set Radford's Cyclopedia of Construction Published 1926 Publication dated 1906, 1 volume of Work, 2 CPR Locomotive Design Books, 1 CPR Roll Top ticker dispenser, 1 CPR Royal Hudson Crown; for Administration: 1 painting of six species of British Columbia freshwater game-fish by Tommy Brayshaw, British Columbia sport-fisherman, fishing guide and artist. All of these entered the museum's collections.

Nineteen eighty-one has seen the completion of the third phase of the G. Clifford Carl Memorial: Phase 1 was the establishment in 1971 of the G. Clifford Memorial Bursary to be awarded annually to a 3rd or 4th year student of biological sciences at the University of Victoria. Phase 2 was the G. Clifford Carl Book Collection which is housed in Room 203 (a reading room), Biology Department, Cunningham Building, University of Victoria. Phase 3 has been a plaque carved by Richard Hunt, museum carver. The plaque is to hang in the reading room (Room 203) Biology Department, Cunningham Building, University of Victoria. The plaque depicts a sculpin (one of the numerous marine fishes of the family of Cottidae). The story of the carving, written by Richard Hunt, accompanies the plaque. A short ceremony was held in the Reading Room, Friday February 12, 1982, at 3:00 p.m. at which time the plaque was unveiled. Executive members of the Friends were invited guests.

Museum Day Celebration: The Museum held an Open House from 2:00 p.m. to 8:00 p.m. on May 14, 1981 in commemoration of International Museums Day. The participation of the Friends of the Provincial Museum was arranged by Mrs. Sylvia Genge working with Ms. Maureen Gee, Education and Extension Division, and the Museum committee. The Docents and the Friends shared a booth on the main floor from which informative literature was distributed. A taped slide-show portrayed the work of the Docents and that of the Friends. An estimated 4,000 people visited the Museum on this occasion.

Newcombe Auditorium: As a part of Newcombe Auditorium Week proclaimed by the City of Victoria to be held September 13 - 19, the Lieutenant-Governor of British Columbia and Mrs. Henry Bell-Irving invited members of the Newcombe staff and volunteers to tea at Government House on the afternoon of Thursday, September 17, at 3:00 p.m. Because of the long-time association of the Friends with the Newcombe Program the Board of Directors with their wives, husbands or friends were especially invited.

Sincere thanks from the President must be extended to: R. Yorke Edwards, Director; William D. Barkley, Assistant Director; Mrs. Ede Ross, Manager, staff members and volunteers of the Museum Gift Shop; Executive Members and Committee Heads of the Friends of the Provincial Museum; the Board of Directors of the Friends of the Provincial Museum; the Staff members of the Museum General office; the Staff members of Education and Extension Division; The Museum personnel as a whole; the volunteers in any Museum endeavor; Margaret Arnseneau, Director Friends of the Provincial Museum for assistance with routine and emergency telephoning; Gordon McClary, accountant; Thorne Riddell, Chartered Accountants; George F. Jones, Lawyer; and to all persons who may have encouraged, assisted or supported.

It is evident that the time has come to make solid the base of the Friends - to lengthen its vision and to diversify its activities; moreover to tap that invaluable resource which is to be found in the persons who make up the collective body of the Friends.

Change is on the way and the Friends will change with change. Only the intent of the Society can remain constant. Protect it well against the pressures exerted upon it. Adhere to the aims and objectives, as laid down in the constitution, so that in the years ahead the society may continue to be recognized as Friends of the Provincial Museum.

Mrs. Harriet Esselmont
President

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BRITISH COLUMBIA PROVINCIAL MUSEUM
REVIEW - 1982

Yorke Edwards, Director

This was the year of the object, the purpose being to encourage staff and others to look more closely at objects in museum collections, searching for what information those objects contain rather than using them as illustrations in narrative stories about other times and distant places. Three events during the year were associated with the idea: an Object of the Month was displayed each month in the Museum foyer; Dr. Miller began organizing a book with North American scope on the theme: Museum Collections and Biological Research; and Tom Loy perfected - almost to the point of publication - his techniques for identifying, to species, the blood residues frequently found on stone weapons thousands of years old.

It was a year of good things and some not so good. On the bright side, Newcombe Auditorium opened after being closed for a year, with the Friends of the Provincial Museum supplying necessary funds as they often did in the program's experimental years. In addition, the Friends presented the museum with a large freeze drier which gives the taxidermist full capability in using new freeze-drying techniques in taxidermy. Two surveys were concerned with future improvements, one documenting space needs and floor overload dangers in the 'tower' and another recommending additional Assistant Directors in the Directorate. Finally, for the eleventh year running, over a million people entered the main doors, but the total was nevertheless the lowest since 1971. So much for the bright side.

On the tarnished side: the marked decline in visitors to the exhibitions was partly due to economic conditions curtailing travel. Another contributing factor was the closure of the entire second floor (natural history) for most of the year to remove asbestos insulation which is a health hazard, and to improve fire prevention plumbing. A six-day strike of government employees in August at the busiest time of year further reduced the figures.

In March the Museum obtained the services of Mary Virtue, Librarian, and for the first time had a full-time professional managing its large library which, with no central home, is scattered about the Museum in a dozen locations. In contrast, the Museum's incomparable designer, Jean Andre, left for private practice in April, ending a remarkable era in which the museum controlled most of his productive time and benefitted from most of his creativity. In addition, Dr. Brian Ainscough, Assistant Curator of Entomology, left after about ten years of improving the insect collection and studying soil organisms. Through the year a freeze on appointments of new staff prevented the hiring of replacements.

With sadness we record the death, on September 28, 1982, of Dr. Robert Herbert Carcasson, Curator of Entomology at this museum from 1973 to 1979, a specialist in the taxonomy of butterflies, creator of beautiful biological illustrations, and author of a field guide to coral reef fishes.

Also dead is Hamilton Mack Laing, pioneer naturalist, who died in Comox, aged 99 years, on February 15, 1982. His large collection of birds is in this museum, while his library, diaries, photographs and papers were willed to this museum (except for those appropriately going to the Manitoba Museum of Man and Nature).

The new carving shed in Thunderbird Park was opened two years after the previous one burned. Delays were prolonged by difficulties finding cedars large enough for the massive beams.

After some years of limited success in encouraging anthropologists to replace the old, blue-covered Heritage Series, Our Native People (produced by the Provincial Archives, 1952 to 1966), an experimental alternative was begun, involving the well-known author Ruth Kirk in writing a book with anthropologists as frequent consultants.

The museum published more books than usual during the year, the result of a number intended for 1981 being delayed. The year's production includes: A Bibliography of Pacific Northwest Herpetology; Sockeye and Tinplate, about salmon canning; English, French and Scientific Names of Pacific Fish of Canada; Food Plants of British Columbia Indians, Part 1 - Coastal Peoples, a second edition; An Illustrated Key to Monocotyledon Families of British Columbia; The Sunflower Family (Asteraceae) of British Columbia; Ethnobotany of the Hesquiat

Indians of Vancouver Island; An Illustrated Key to Dicotyledon Families of British Columbia; Crabs and their Relatives of British Columbia; Waterfowl on a Pacific Estuary.

Triumphs and more trials than usual characterized the year, but as the accounts from Divisions that follow will show, there never seems to be a dull moment in a large museum.

AQUATIC ZOOLOGY DIVISION

Alex E. Peden, Curator

Without doubt, the production of the Museum handbooks in 1982 provided the main highlight for the Aquatic Zoology Division. Dr. Josephine F. L. Hart's contribution on the Crabs and Their Relatives of British Columbia (Handbook No. 40) and Associate Curator, Philip Lambert's work on sea stars (commonly called starfish; Handbook No. 39), produced late in 1981, should be well used by those frequenting our seashores. Most work on the Division's collections concerned cataloguing and identifying a large backlog of aquatic specimens. Technician Grant Hughes has completely re-examined the fish collection with the view to storing specimens in smaller containers or vats to save space. Because of the weight of large vats, these items were moved to the basement from the fourth floor of the Curatorial Tower. In his own (non-salaried) time, Mr. Hughes also worked toward a Master's degree doing research on the fish collections.

Technician Gordon Green spent considerable time working with the invertebrate collections. Identifying invertebrates is often difficult and, compared to fish, requires considerably more study and preparation. We solicited the help of Dr. Bill Austin to identify sponges and Mr. Dave Denning to identify bryozoans.

Two major field trips were undertaken by the Division. In preparation for a proposed revision of the B.C.P.M. fresh-water fish Handbook, staff did field work to study newly reported occurrences of the spottail shiner (Notropis hudsonius) and cisco (Coregonus artedi) in British Columbia. At the same time many arctic and eastern fishes were added to the collection from the Fort Nelson and Maxhamish Lake areas in the northeastern part of the province. The Division's staff had an experience of a lifetime when they got the opportunity to survey deep-water habitats in Jervis Inlet from the Canadian submersible Pisces IV stationed at the Institute of Ocean Sciences near Sidney. Because of our experience at SCUBA and extensive knowledge of marine fauna, we believe our staff has superior skill for identifying organisms underwater as compared to most biologists.

His handbook on sea stars completed last year, Phil Lambert shifted his research to the Holothurians (sea cucumbers) of British Columbia, and pursued duties on the long overdue marine exhibits of the Museum. Alex Peden continued research on several marine fish groups (Pholis, Liparis, Icelinus) and finally submitted a report on the shorthead sculpin (purportedly threatened by coal development) in the Flathead River.

We are pleased and grateful to Amax Mines for giving permission to release valuable collections to this museum, through Dobrocky Seatech Limited. Included were first-recorde occurrences of three Alaskan fish species in British Columbia. Release of scientifical valuable specimens through such surveys are to be commended, and it is our opinion that fish population sampled in Alice Arm includes possible expatriates from Alaskan locali and that surveys in other northern inlets of British Columbia will reveal addit populations.

Hermit Crab (Pagurus ochotensis), common from the Bering Sea to California; photographed by Brent Cooke at 40'depth off Saxe Point, Esquimalt

ARCHAEOLOGY DIVISION

Donald N. Abbott, Curator

Doubtless the outstanding activity for the Archaeology Division in 1982 has been that associated with the first year of the Pacific Rim Archaeological Project, a complete inventory of the heritage resources in Pacific Rim National Park being carried out by the Division under a three-year contract with Parks Canada and in co-operation with the Nuu-chah-nulth Tribal Council. Other highlights of the year included inauguration of the new PARIS system for managing and interacting with the National Inventory data base, and the successful completion, by the Associate Curator, Jim Haggarty, of his Ph.D. in anthropology at Washington State University.

We regret that Dr. Gay Frederick, Head of the Extension Section, resigned from her position effective March 31 due to family responsibilities. Dr. Frederick had made many major and lasting contributions to the Museum, particularly in developing the bioarchaeology programs in extension work, and in her continuing association with the Hesquiat Project. Richard Inglis has continued to act as Head of the Extension Section as well as assisting Dr. Haggarty with organization and direction of the Pacific Rim and other Westcoast research projects.

Mr. Al Mackie was associated with the Division in carrying out, under contract with the Heritage Conservation Branch, a survey of heritage sites on Meares Island near Tofino. Other temporary staff involved in the Westcoast field and laboratory research included Laurie Williamson, Wilfred Robinson, Morris Sutherland, Denis St. Claire, Margaret Humestone and Calvin Claxton. Pam Montgomery worked for five months with the National Inventory crew as a registrar and Susan Crockford was contracted for maintenance of the faunal collection.

Field work - Pacific Rim field work during the first season of the project, extending from mid-June to mid-October, was concentrated in the Broken Group of Islands in Barkley Sound and resulted in the finding, mapping, and detailed description of 160 archaeological sites, making this archipelago one of the most thoroughly documented archaeological areas in Canada. Although no excavation or, indeed, any kind of disturbance of the sites was involved, this work, when added to information given by Tseshaht and other Nuu-chah-nulth people and to the results of library research into the ethnohistory and ethnogeography of the area, is yielding a greatly improved understanding of the pre-contact and early historic populations and cultural patterns of the west coast of Vancouver Island. In addition to the principal investigators, and the staff hired by the project, each of whom were in the field during most of the four-month period, most members of the Division staff also spent from one to several weeks participating in this field work.

Three of the curators also spent periods assisting with the similar field survey of Meares Island which was carried out from September to late December and resulted in the thorough recording of 190 sites.

In our other area of current long-term research interest, far northern British Columbia, it was decided to forego archaeological field work this year in favour of palaeoenvironmental investigations which were carried out in September. In this project, supported by the Friends of the Provincial Museum, two staff members located sites and drilled cores for palynological analysis to determine the environmental history of this little-known part of the province.

Other palaeoenvironmental field research included a trip in May to the Slocan Valley to core a lake for a palynological record in association with the Vallican archaeological study and to collect specimens from southeastern British Columbia for the archaeobotanical reference collections. In December, a visit was made to the excavations under way at the St. Mungo Cannery Site on the lower Fraser to consult on stratigraphy. Pollen cores for the Pacific Rim Project in the Broken group were taken during October.

In November, two curators were able to take deep column samples from a sewer excavation in the Fairfield district of Victoria which yielded old lake and marine sediments giving an excellent post-glacial record for this area. Staff examined several local sites and properties undergoing development throughout the year and assisted Heritage Conservation Branch in examining burials discovered on Newcastle and Protection Islands.

Research - This included work on the Hesquiat, Brooks Peninsula, Ninstints, and Muncho Lake projects. Cores, sections, and other palaeoenvironmental samples previously taken in the Brooks Peninsula, Fraser Delta, Lynn Canyon, South Thompson and Port Hardy areas were analyzed.

Other research projects included continuing theoretical and practical work with the problem of ancient blood residues on stone tools and adjacent soil matrices, Mayan mercury smelting, use and distribution of labrets, spear-throwers and darts, early trade ceramics, muskets, and other artifacts, Salish ritual bowls, and the effect of mosquitos on lower Fraser settlement patterns.

Communicating - Numerous reports and publications were completed or are in preparation. Curators reviewed or refereed various papers and grant applications submitted by others to journals and agencies respectively.

Curatorial staff members gave papers at the following conferences: Northwest Anthropology and B.C. Archaeologists conferences (Simon Fraser University); Seventh International Conference on Computers and Archaeology (Birmingham, England); International Symposium on Archaeometry (Bradford, England); Canadian Archaeological Association (Hamilton); Ministry of Forests Symposium on Grassland (Kamloops); and American Quaternary Association (Seattle). We are also involved in organizing the large Eleventh International Congress of Anthroplogical and Ethnological Sciences to be held in British Columbia in August 1983.

In March, four of the Archaeology curators presented a special public lecture series From Blood to Totems in the Newcombe Auditorium. In addition, staff participated in seminars and gave many talks and demonstrations to schools and community groups in various centres. We participated in Museums Day special events in May with a lahal game, artifact identifications and technology demonstrations.

Upgrading of the archaeology gallery exhibits was carried out or in process and Dr. Hebda was involved in a redesign of the entrance to the natural history gallery. We prepared moulds of the petroglyphs in Petroglyph Park, Nanaimo, from which concrete casts were to be installed there by Parks Branch and the Heritage Conservation Branch.

Collection - Thirty-two new accessions to the Archaeology collection were recorded in 1982. These ranged from single specimens to large lots including many boxes of recorded artifacts with associated materials and documentation from projects carried out by the University of Victoria, and approximately 200 boxes of material from Cariboo College containing over 22,000 artifacts plus soil samples, faunal remains and other specimens, and documentation. Our own field projects this year did not involve collecting artifacts but several specimens were added to the faunal and floral comparative collections.

Numerous objects were brought in by the public for identification, some of them left with us temporarily for recording and photographing. Casts were made of a stone carving found near Prince Rupert. A small crew from the Division visited a home in Central Saanich to catalogue and photograph a collection about to be moved with its owners. National Inventory personnel also recatalogued to current standards all the artifacts on display in the gallery.

The inventory and respacing of artifacts in storage continued and is resulting in a 10-15% saving of space. We added, in addition, ten new artifact storage cabinets in the moveable shelving units, and in the warehouse installed shelving for more efficient storage of soil samples. Soil and faunal samples were reorganized and their boxes numbered and labelled. All reference plants in the archaeobotanical collection were registered and catalogued and pollen reference samples were prepared and organized. Normal maintenance of the faunal and human skeletal collections was carried out.

Outside scholars and students used the collections in connection with their research projects.

Inventory - Staff involved with the National Inventory Programme (which was re-named the Canadian Heritage Information Network or CHIN) were flown to Ottawa for a five-day course on the new PARIS system, inaugurated at the B.C.P.M. in August. This new system, superseding the ISIS system, provides more sophisticated programs for data entry, editing, and retrieval and includes other modules which allow complex sets of instructions for these procedures to be created by the user. This advance has resulted in a great increase in productivity.

BOTANY DIVISION

Robert T. Ogilvie, Curator

Collections - Eight thousand vascular plant specimens were accessioned into the collection, making a total collection of 120,000. Major collections received include: 3,000 specimens from G. Douglas; 1000 specimens from British Columbia Forest Research Branch; several hundred specimens from Terrestrial Studies Branch; an early collection of the 1940s from O. C. Furniss; and valuable collections from F. Fodor, G. Stanley, W. van Dieren, W. S. Hong and H. Roemer. The gymnosperm cone collection of 600 specimens was individually boxed and accessioned.

Loans of 1,645 specimens were made to and received from herbaria around the world: Vancouver, Yukon, Alaska, Edmonton, Calgary, Saskatoon, Toronto, Ottawa, Quebec, Nova Scotia, Washington, Idaho, Montana, San Francisco, Berkeley, Stanford, Claremont, Michigan, Milwaukee, Missouri, Harvard, New York, Smithsonian, British Museum, Paris, Madrid, Copenhagen, Uppsala, Geneva, Prague, Moscow, Peking.

Field Collecting - An active field season by the curators brought in over 5,000 specimens from southeastern British Columbia, the Cariboo, the northern Rocky and Coast Mountains, Vancouver Island and coastal islands. Extensive collections were made of the buttercup family, grasses, aquatics, sedges, and alpines. Six new species records were added to the flora of British Columbia, and major range extensions were found for a number of rare alpine endemic and disjunct species and for several grass species.

Exhibits - Planning continued on the natural history galleries including consideration of designs to remodel the introductory section and corrections to the gallery, and for preparation of the fresh-water gallery. An exhibit was completed on David Douglas, Plant Explorer, as well as a small exhibit in the Object of the Month Series on Macoun's meadow-foam - a local endemic of southern Vancouver Island. Three botanical displays were shown in the annual museum Open House.

Native Plant Display Gardens - A colour poster The Wild Gardens was printed. Over one hundred plant species were added to the gardens and an index card system for recording the garden specimens was established.

Public Service - Several thousand plant identifications were made for outside agencies including: Canadian Wildlife Service, Canadian Forestry Service, Agriculture Canada, British Columbia Forest Service, British Columbia Ministry of Agriculture, Terrestrial Studies Branch, and the Poison Control Centre. Numerous identifications were made for the general public, including weedy, poisonous, and edible plants.

Botanical Illustration - In the publication of the first volume of the sunflower family of British Columbia, 73 pages of illustrations of these plants were included. The drawings for the second volume in this series have been completed. Illustrations were finished for a manuscript on the ethnobotany of the Nitinaht Indians, and for a paper on the rough fescue grasses of the province.

Research - Research for a monograph on the buttercup family is approximately half completed, and work on the fescue grasses was finished. Research was continued on the alpine and maritime flora, on the rush family, quillworts, bladder ferns, spleenworts, and hornworts, on the flora and vegetation of Brooks Peninsula, and on disjunct species on Vancouver Island. The final editorial review was completed for the handbook on the sedge family of the province.

Research Associates - Dr. George Douglas has published the first volume of the sunflower family of British Columbia, and has finished the manuscript for the second volume in this series. An annotated bibliography of floristic studies in British Columbia has been completed.

Dr. Nancy Turner continued work on ethnobotany of British Columbia Indians: nutritional and chemical composition of Indian plant foods, a manuscript on the ethnobotany of the Thompson Indians, and a publication on the ethnobotany of the Hesquiat Indians. She also

began research on a large collection of Chinese medicinal herbs.

Harvey Janszen has published a flora of Mayne Island, and is completing manuscripts on the floras of Galiano, Pender, and Salt Spring Islands.

Dr. Margaret Heimburger has continued collaborative research on the buttercup family, with intensive studies of the Batrachium and R. occidentalis-californicus complexes.

ENTOMOLOGY DIVISION

Robert A. Cannings, Curator

The Entomology Division experienced considerable change during 1982. Brian Ainscough resigned effective March 31 leaving Rob Cannings as the sole entomologist. The search for a new Assistant Curator was a priority in the spring, but the effort ended with a freeze on hiring in July. On a more positive note, the Division's office space grew by about 50 per cent with the addition of office space for the curator, courtesy of the Aquatic Zoology Division. The Division lost a good friend on September 28 when Dr. Bob Carcasson, the Division's first curator (1973-79), died after a lengthy struggle with cancer.

Collections: The reorganization and consolidation of the pinned insect collection stressed in 1981 continued through 1982. The success of this work was most evident in three families: the metallic, wood-boring beetles (Coleoptera: Buprestidae); the robber flies (Diptera: Asilidae); and the tachinid flies (Diptera: Tachinidae). All specimens of these families were re-examined and properly identified.

The nucleus of an entomology photograph collection was begun. The Friends of the Provincial Museum kindly purchased equipment necessary for photography of insects in the field, and the first several hundred colour slides of insects were taken. The photograph collection will be used for public lectures, exhibits, publications and research.

The Division's library was completely reorganized in 1982. The expanded office space gave room for additional library stacks; entomological journals, once housed in the Aquatic Zoology Division, were repatriated.

Shortage of manpower was eased by the invaluable help of Phil Nott, seconded from Vertebrate Zoology Division for several hours a week. Angela McClung, as a volunteer, labelled and sorted hundreds of insects, providing much needed assistance.

Field Work - A field trip through the Thompson-Okanagan to photograph insects was the main effort of early summer. Brent Cooke of the Aquatic Zoology Division was seconded to the Entomology Division for this trip; his photographic expertise and sharp eyes were major factors in the trip's success. New techniques for photographing living insects were explored.

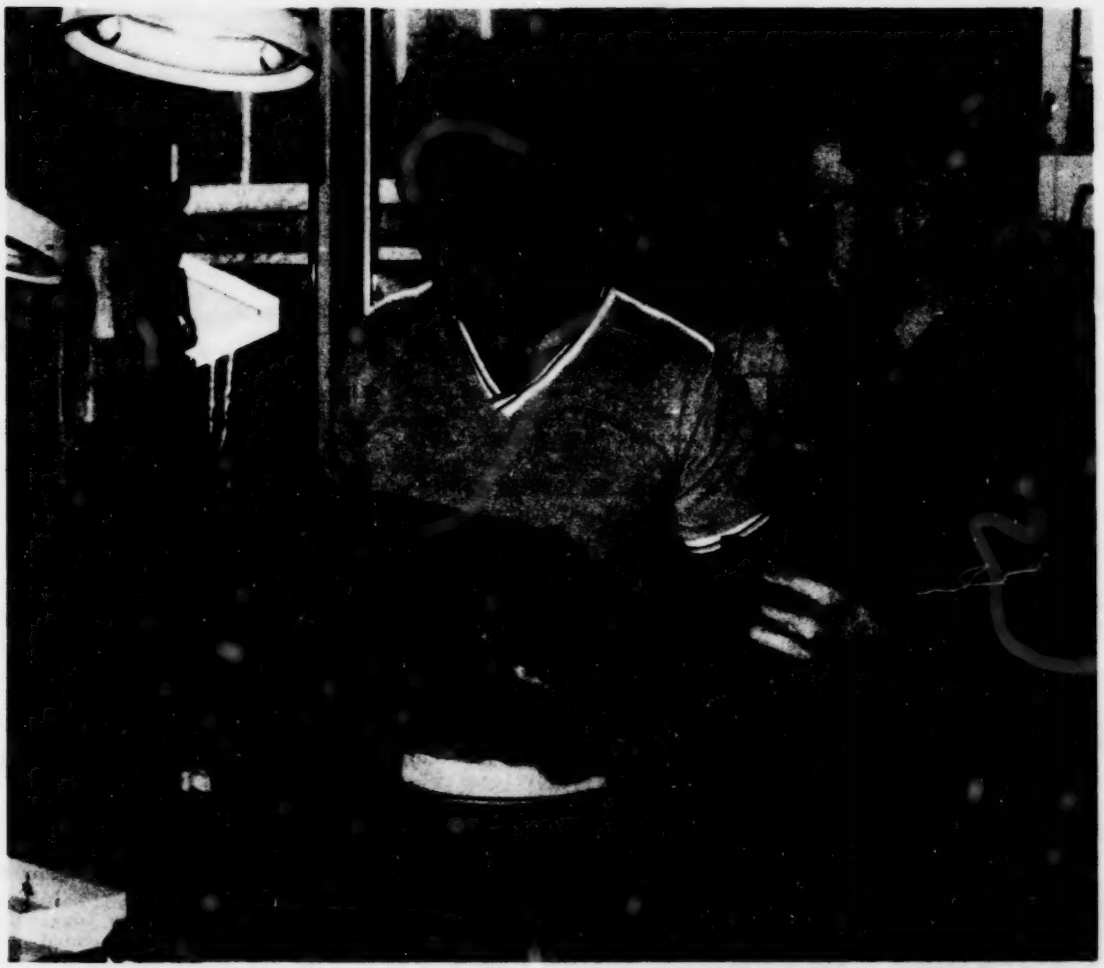
The second major trip of the summer was a wide-ranging one with entomologists from the University of British Columbia. Rob Cannings joined Geoff Scudder of the University of British Columbia Zoology Department and traveled south from Fort Nelson to Vancouver. Special attention was paid to the insect fauna of the grassland bluffs along the Peace River. Three new species of true bugs (Hemiptera) were added to the provincial list. At Vancouver, Syd Cannings replaced Scudder, and the journey continued east. This August field trip had two aims: to collect insects of the East Kootenay grasslands and to plan routes for the field trips of the seventh International Symposium of Odonatology to be held in Calgary in 1983. Rob Cannings is in charge of planning field trips for this major conference on dragonfly biology.

Research - Rob Cannings was appointed to the Scientific Committee of the Biological Survey of Canada for a three-year term and attended committee meetings in Ottawa in April and

October. The Biological Survey began as a project of the Entomological Society of Canada to encourage and coordinate research in the faunistics of Canadian insects. Subsequently it has been incorporated into the National Museum of Natural Sciences and will diversify to include other natural history disciplines. Based on this involvement, 1982 research centred on two projects sponsored by the Survey - a continuing study of insect communities (especially of robber flies) of British Columbia grasslands and a new study of the biogeography of Queen Charlotte Islands insects. The latter meshes with this Museum's Brooks Peninsula study. As part of the grassland research, Rob Cannings attended a British Columbia Forest Service conference at Kamloops in June on the classification of provincial grasslands. In Ottawa, he worked in the Canadian National Collection on the identification and distribution of British Columbia robber flies.

Other projects begun in 1981 continued in 1982. These included the Brooks Peninsula project, centering on the identification and biogeography of northern Vancouver Island insects; the study of parasitism of Barn Swallow nestlings by blow flies; and the taxonomy and distribution of mantisflies (Neuroptera: Mantispidae) in Canada.

Publications - Rob Cannings edited and produced two issues of Boreus, the newsletter of the Entomological Society of B.C. This effort was a significant part of the Division's public relations activity, and attempted to improve communication among people interested in the study of the province's insects.



Chris Denbigh (Exhibits) and Rob Cannings (Entomology) examine a model of a Giant Water Bug (Lethocerus americanus) in preparation for the Life In The Soil diorama

Exhibits - The Life in the Soil diorama, part of the coast forest exhibit, opened in April. This 100X life-size model of one cubic inch of soil and its inhabitants proved popular with museum visitors. Plans for the fresh-water gallery matured, and Chris Denbigh of the Exhibits Division produced more models of invertebrates for its dioramas. The production of this gallery was the theme of Entomology Division's display of living aquatic invertebrates and their models during International Museums Day on May 18.

Extension - Eight public lectures and field trips were done in 1982. In addition, Rob Cannings organized and spoke at a symposium on the biogeography of Pacific Northwest insects held during the September annual meeting of the Entomological Society of B.C. in Victoria.

ETHNOLOGY DIVISION

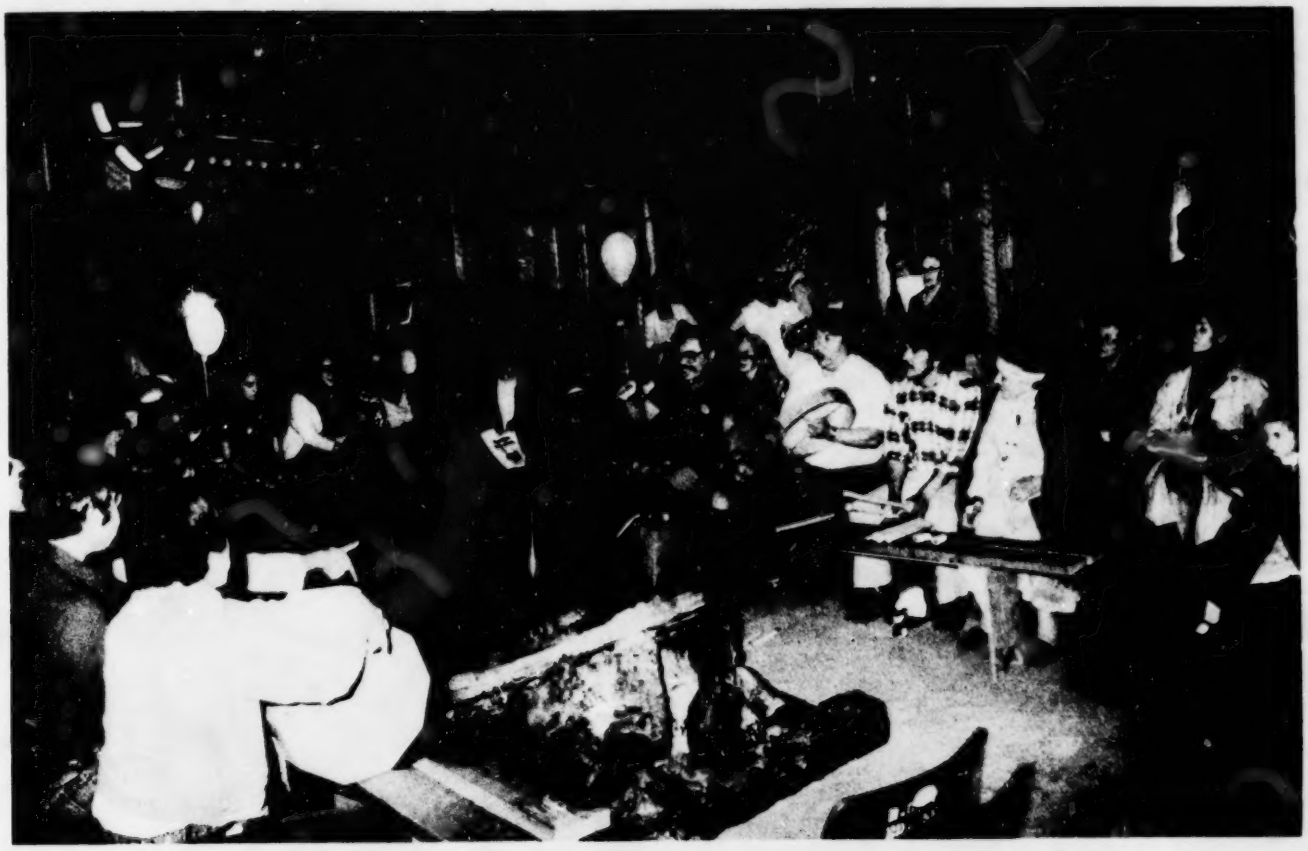
Peter L. Macnair, Curator

Several areas of activity made 1982 a memorable year for the Ethnology Division. The year saw the new carver's studio completed, the Division taking a prominent position in Museum's Day activities, and great changes taking place in the care and organization of the artifact and photographic collections. Much credit must go to the valuable help provided by many volunteers who chose to donate time and effort to help in many projects related to the collections. Also in 1982 the Division altered course somewhat radically, in that the major point of contact with the public shifted from exhibit programs to extension activities. It appears that the resource dimension of the Division is being utilized to a far greater extent than in the past as both the collections and staff have come into greater demand by interested groups outside the museum.

Exhibits - The staff were involved with regard to the Wild Harvest exhibit. Due to environmental conditions in the display cases, it became unfortunately necessary for all artifacts to be removed from the Argillite exhibit and the gallery was closed. Recent Acquisitions displays were changed twice during the year. Pierre participated in ongoing maintenance of The First Peoples exhibit. Macnair began work on a proposed exhibit for University of British Columbia about Southern Kwakiutl art called The Copper That Came From Heaven. Thanks to the Friends of the Provincial Museum (FOPM), new pieces were commissioned to be placed in the Haida canoe in The First Peoples exhibit.

Research - Chechik continued research on the basketry material collected at Seymour Inlet in 1979. Hoover continued his research on the Tahltan in the field and through archival and photographic sources at the Provincial Archives of British Columbia, as well as at the Canadian Ethnology Society and the Photographic Information Retrieval Section of the National Museum of Canada in Ottawa. Macnair continued research on argillite and on Southern Kwakiutl art. Neary was involved in research concerning the Nuu-chah-nulth (Nootka). A bibliography of publications on British Columbia's Indians was prepared. Macnair and Neary worked with Rufus Watts, a Niska elder, on identifying material in the artifact collections. Staff identified numerous photographs from the National Museum and from the National Ethnography Museum in Stockholm. Savard and Virolainen went to the Vancouver Public Library to study their photographic collection in general, and the Leeson collection in particular. Neary researched various collections of tape recordings of traditional music. Tim Paul visited the British Museum and looked through their Westcoast collections.

Fieldwork - Hoover made two trips to Terrace and Prince Rupert to continue his Tahltan research. Macnair went through Kwakiutl territory with several Kwakiutl elders to record place names and uses (thanks to FOPM). Macnair recorded several potlatches at Alert Bay, Campbell River, Port Hardy and Comox. Neary went to Flores Island to record a native logging site and to Nitinat to collect a culturally modified tree. Various staff members attended a totem pole raising at the University of British Columbia.



Lahal game - Museum's Day, 1982

Collections - Great progress was made in the continuing task of upgrading the artifact storage and the information systems for artifacts. The textile collection was properly photographed and has been much improved by construction of new shelving and a new system for moving blankets. Record shots, on 35 mm film, were taken of most artifacts in storage on the seventh mezzanine floor. A new system for storing paddles was designed, constructed and used. All catalogued silkscreen prints not previously matted were stored in a new system of individual encapsulation, and progress was made in cataloguing and encapsulating the remaining prints. The task of compiling a complete inventory and record location for the seventh mezzanine was partially completed. This project entailed correcting a myriad of mistakes, omissions and oversights which had not been previously addressed. The recataloguing of the collection for the Canadian Heritage Inventory Network continued. A trial set of catalogue sheets was sent to Ottawa for computer entry. Tours of the collections area were given.

Photographic Section - Received collections of photographs taken in the 1940s from the Glenbow, Alaska Historical Library, and the Swedish Ethnographic Museum, as well as some 1930s Ahousat photos. Virolainen acquired some 400 photographs from the National Museum of Man. Converted the majority of the negative collection to acid-free envelopes. Video equipment was compiled, tested and repaired with view to begin production work. Dances in Mungo Martin house were photographed with ceiling flash units. The resulting slides are excellent - possibly the best images of native dances extant. Publication quality photographs were taken of the textiles collection.

Thunderbird Park - Highlight of the year was completion of construction of the new carving studio. The carvers finally were able to move into a good working environment after a year and a half in a most unsatisfactory location. Many major projects were completed,

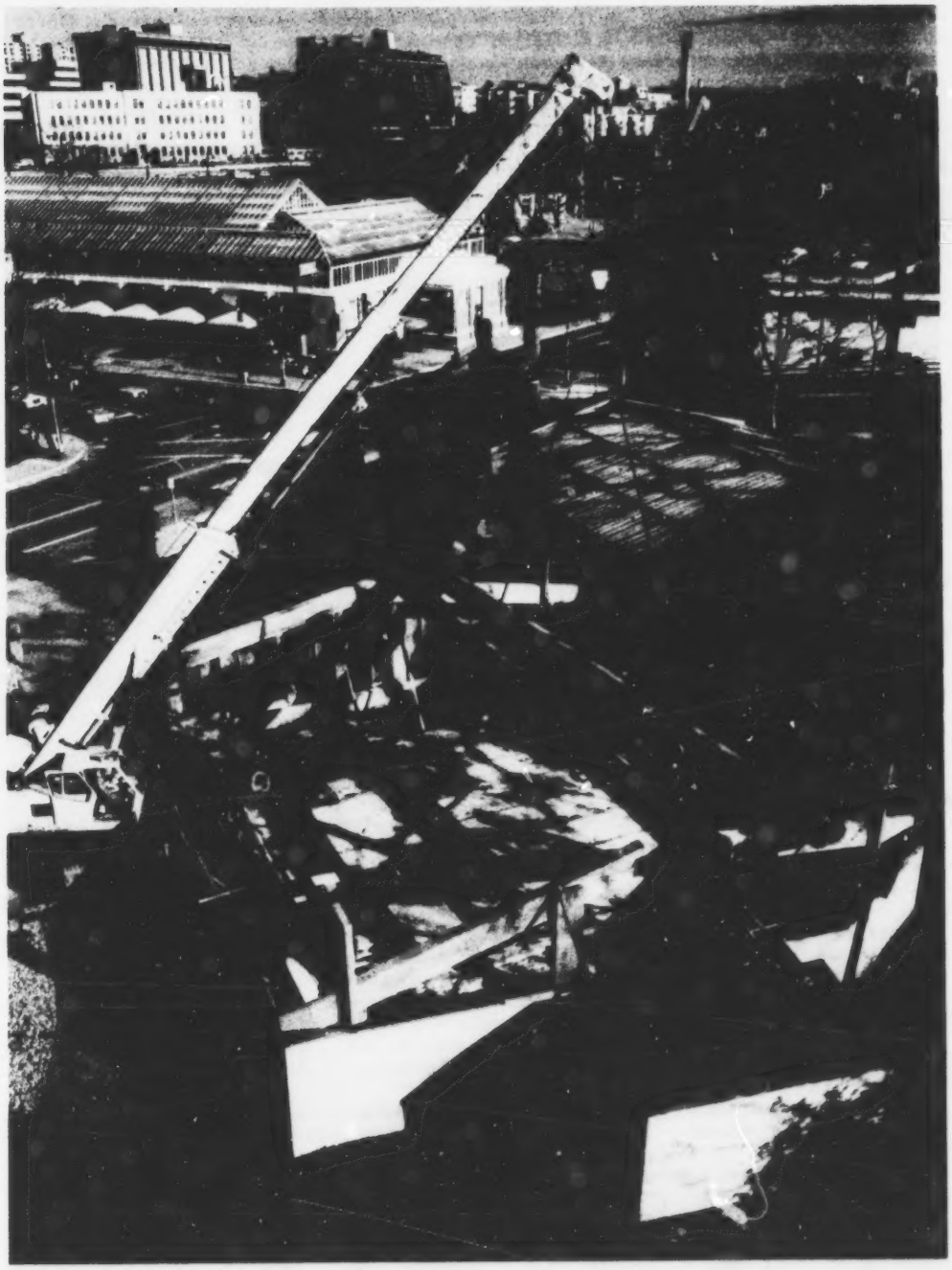
amongst them the Canadian Broadcasting Corporation (CBC) pole, the pole for the Yorkshire Sculpture Park, the Fred Williams memorial pole, and the replication of the Dance of the Animals mask set. In addition, many smaller projects were completed. Tim Paul created some illustrations for the Arima publication, The West Coast (Nootka) People, and began replicating a pole from Friendly Cove. Richard Hunt carved a wooden drum for the Mungo Martin house and a mask for the Field Museum in Chicago. Hunt visited Fort Rupert twice to practice with other artists and went to Chicago to participate at an exhibit opening at the Field Museum. It was learned that the main roof beams in the Mungo Martin house are rotten; the house has been closed until this situation can be rectified. Several additions were made and problems solved in the new studio. For the carvers, the highlight was Paul's trip to the United Kingdom. Very positive response was received concerning this trip from the Yorkshire Sculpture Park, the Canadian High Commission and the British Museum, where Paul demonstrated carving techniques for two days. Paul also completed three masks for Esther Smith.

Extension - It was in this area that the Division expanded most in 1982. Hoover gave a paper The Development of Narrative Structure in 19th Century Haida Tourist Art to the Canadian Ethnology Society annual meeting in Vancouver. Hoover also lectured at Prince Rupert, Campbell River and Victoria. Macnair was resource person for tours of Kwakiutl territory and the Queen Charlotte Islands. Chechik was resource person for a Strathcona Lodge trip to Friendly Cove. Several other lectures were given including those by Macnair at the Field Museum in Chicago and his series of lectures on argillite in the Newcombe Auditorium. Many visitors came to the Division for photographic research and tours including groups from the North Island Community College, Strathcona Lodge, a researcher from the Royal Ontario Museum, two groups of native people from Australia, a researcher from Japan, two from Sweden, two girl guide troops and a group of students from the Native Indian Teacher's Education Program. Assistance was also provided to several film people including the Ontario Education Network, the Alberta Educational TV Network, two separate CBC film crews, and an Anthony Island film crew. Macnair was interviewed by CBC radio on three occasions, Chechik by the CBC French radio station once. Hoover appeared before the Cultural Properties Board in Ottawa. Good coverage of the pole raising at CBC Vancouver was arranged. The Division made a major contribution to International Museums Day with demonstrations, dances, lectures and tours. Thanks to the FOPM, Norman Tait, a Niska carver, came to the Museum to do collections research. Pierre assisted many native groups and individuals including: Victoria Native Indian Education Division, Victoria Native Friendship centre, Kootenay Indian Area Council and the Cariboo Indian Education Training Centre. He also attended the United Native Nations Annual Conference in Port Alberni.

General - The Division's office space was reorganized with Hoover, Savard, Virolainen, Pierre and Neary all being moved. Dorothy Hunt began work in the Division in December. She assisted Virolainen and Savard and updated the Hunt family geneology. Thanks to the FOPM for the acquisition of a very significant collection of masks and ceremonial regalia from the Sam Webber estate. Due to the increased number and activity of the Division's volunteers, a new section describing their work is included here.

Volunteers - Mrs. Olive Quayle continues to be a most valuable addition to the Division. Through the year she participated in many projects, primarily the 35mm record photography inventory and problem solving in the storage area on the mezzanine. The staff all sincerely hope that Olive will continue to grace us with her presence for some time to come. Marni Davis continued her research on collectors and collections relevant to the Division's holdings and is compiling a card index on these topics. She also prepared and gave a lecture to the docents on the Interior Salish. Sharon Sage participated in organizing the new paddle storage and did some cataloguing. Nancy Jackson helped in several respects, including 35mm record photography, inventory, silkscreen print encapsulation and cataloguing. Marion Noakes began work on updating the collection location file and participated in doing a collection inventory. Audrey Seward did some cataloguing and assisted in the upgrading of the textile storage. Derek Swallow updated and upgraded the potlatch usage files and participated in the collection inventory. David Jackman catalogued and encapsulated a large portion of the silkscreen print collection. Very special thanks are given to all of the volunteers whose help has become a vital part of the Ethnology Division's operations.

Loans - The following is a list of artifact loans which were in process or were initiated in 1982: 8 totem poles, or sections, to Simon Fraser University; 5 small objects to the Captain Cook Birthplace Museum at Middlesborough, U.K.; 1 toogwid puppet to the Puppeteers of America in Washington, D.C.; 2 amhalaits and 2 blankets to 'Ksan'; 8 Athapaskan artifacts to the Fraser-Fort George Museum Society; and 2 artifacts to the U'Mista Cultural Centre in Alert Bay.



New carver's studio under construction in Thunderbird Park - spring 1982

Accessions - Donations: Mr. G. A. Mintz, a silver bracelet and 19 silkscreen prints; Mrs. Theo McBurnie, two silkscreens; Mr. R. W. Sowerby, collection of 13 assorted artifacts; Miriam Lister, a bracelet and a basket; Tim Paul, two silkscreen prints; Ralph Dent, a Westcoast mat; Modern History, a pair of snowshoes; Mrs. F. M. Shandley, a pair of gauntlets; James A. Ogilvy, a Cowichan sweater and a pair Cowichan socks; Shirley Cuthbertson, a silkscreen print; Howard Roloff, two large, framed paintings; Gary White, a T-shirt and a wool winder; Mr. & Mrs. Clifford Faulkner, a Coast Salish basket; Roy Hanuse, a poster; Ben George, a Coast Salish mat section; Susan Gibson, collection of 10 assorted artifacts; University of B.C., eight silkscreen prints; Miss Bradshaw, a model pole; Peter Macnair, potlatch gifts. Purchases: 48 silkscreen prints by various artists; two bowls by Roy Vickers; a drum by Art Thompson & Ernie Chester; 27 Westcoast basketry items by various artists; five pieces of argillite; a wooden pipe; a Tsimshian bowl; a Westcoast model canoe; four silver bracelets by various artists; a painting by Mark Henderson; three paintings by Pat Amos; a pendant by Bill Reid; a Thaltan scraper; a drum by Susan Sparrow; a mask by Frank Nelson; two masks by Gene Brabant; a tray by Reg Davidson; a copper pendant; a kerfed box; a mask by Johnny Davis; a mask by Fah Ambers; two shaker, mass bells; a drum by Art Thompson; a Coast Salish rattle; a Chilkat blanket; a mask by Tony Hunt Jr.; and the Sam Webber collection, consisting of 16 masks, 12 headbands, seven neckrings, nine anklets, four wristlets, two boxes, a trunk, 6 capes and 1 blanket. Thunderbird Park: In 1982, Richard Hunt made one bear mask and Tim Paul made a set of lahal sticks which are now part of the artifact collection.

LINGUISTICS DIVISION

Barbara Efrat, Curator

Contracts - It was a most exciting year for the Division's contract programs. For the first time the Division was able to send researchers to investigate three little-known Athabaskan languages in British Columbia - Sekani, Slavey, and Tahltan. Professor Patricia Shaw of the University of British Columbia continued her 1981 Tahltan research for the Division, while Professor Keren Rice, University of Toronto, studied the Slavey spoken in the Fort Nelson area, and Sharon Hargus, a graduate student at University of California at Los Angeles, commenced the first modern linguistic work in the Sekani language and concentrated her efforts on the dialect spoken in the McLeod Lake area. Other contracts were given for work in the Ahousat dialect of Northern Nootkan (Wakashan family), and the Becher Bay Clallam dialect of Straits Salish, Okanagan, Columbian, and Shuswap, all of the Salish family.

By the end of 1982, the Division's tape collection comprised about 1700 originals, each of which was duplicated and stored in a separate location for safe-keeping.

The Division accepted a manuscript of a Halkomelem Salish basic reference grammar by Professor Wayne Suttles, Portland State University, which is a candidate for publication by the Museum in a proposed series for such grammars. As well, the Division contracted with Dr. Suzanne Rose to write a grammar in Northern Nootkan for the same series.

Exhibits - The Division provided the story line for a new travelling display Language: the Great Game, and a Peirce wire recorder from the 1940s served as Object of the Month in May. As well, Dr. Efrat prepared, at the request of the Makah Tribal Council, Neah Bay, Washington State, a small travelling exhibit on the Makah language for their museum.

Public Presentations - Dr. Robert Levine gave several talks during the year: 1) Variable Binding into Infinitives to the Linguistic Colloquium at the University of Victoria; 2) The Linguistic Prehistory of B.C. to the B.C. Archaeology Society; and 3) Native Languages of the Pacific Northwest: Roots (and Branches) of Linguistic Change at the Department of Anthropology, University of Victoria.

Dr. Efrat organized and chaired: 1) a session on The Uses and Misuses of Cultural Property at the annual Canadian Ethnology Society meeting in Vancouver; and 2) The Third

Working Conference on Central Coast Salishan Languages held at the Museum in June.

Research - Dr. Barbara Efrat commenced work with co-author, Dr. Thom Hess, University of Victoria, on a chrestomathy of texts in Island Straits (the dialects of Straits Salish spoken on Vancouver Island), as well as revising some papers on Nootkan linguistic topics for publication. Dr. Robert Levine finished a booklet on the Division's activities entitled The Spoken Word, and was co-editing a collection of grammatical papers.

Other Activities - Both curators evaluated articles and books on our area of the discipline, for linguistic periodicals and publishers, and assessed a number of grant applications for funding institutions. As well, upon request, help and advice was given to individuals and native groups wishing to develop language lessons and linguistic archives, such as the Nuu-chah-nulth Tribal Council in Port Alberni.

Dr. Efrat was appointed chairperson of the Training Committee of the B.C. Museums Association for the year 1982-83.

MODERN HISTORY

Daniel T. Gallacher, Curator

More than in past years the Modern History staff gave its main attention to collections management problems. Of these, large-object storage concerns were paramount with considerable success achieved in improving the Viewfield Warehouse through better security and racking. A complete upgrading of the collections registrations system (including categorization and documentation) was begun in the latter half of the year, and this process is expected to continue through 1983. A major consideration is to make the collections records "computer-ready". Another significant innovation is collections valuation through statistical techniques that shows good promise for solving the perennial problem of insurance estimates.

Collections - Yet tighter restrictions on acquisitions were adopted with the aims of reducing pressure on storage capacity and to emphasize only goods produced in the province. A Collections Committee of senior curators regularly reviews all donations, bequests, transfers, trades, purchases, or loans, before items are added to the holdings. Considerable effort is made by staff to find alternate locations for those materials refused. Another responsibility of this committee is to periodically "weed" the collections by recommending items for deaccessioning and disposal. Objects so designated normally are redundant because of duplication or are not within the acquisitions' policy which puts a premium on British Columbia made materials. The policy further admits objects to strengthen the main gallery exhibits, the Museum's education programs, or to fill critical gaps in special holdings. Acquisitions of special note for 1982 were the contents of the Mah Yuck Tong herbalist shop (Victoria); a cross section of tools, equipment, and blueprints from various sawmills and machine shops in the province that either closed or were in the process of re-tooling; and the Hill-Tout collections of badges and insignia of military and public safety units as transferred from the Provincial Archives of British Columbia.

Research - With so much emphasis upon collections management, efforts in research and publications declined during the year. Still, considerable study was performed in the subjects of mining (coal, gold), sawmilling, cement production, tobacco growing, river and lake vessel construction, helicopter operations, and the British Columbia Provincial Police. On request from other agencies special studies and research were undertaken for reports on the Princess Marguerite, Princess Patricia, two British Columbia Electric Railway interurban trams, and forest history for upgrading the British Columbia Forest Museum's exhibits. Curators further spent considerable time preparing public lectures on coal mining, rural and urban life, transportation history, and a variety of social themes. Staff participated actively in the docent training program, advisory services training seminars, and university

courses as guest lectures.

Exhibits - A major history display entitled Woodworkers' Art opened in January after more than a year of research and collecting. This exhibit was the most ambitious temporary history display in recent years, and is now travelling throughout British Columbia. Work was begun on both a temporary exhibition dedicated to the British Columbia Provincial Police, and an extensive upgrading of the section of the gold rush permanent gallery through additions of more artifacts, a complete repainting of the diorama, and improvements to the waterwheel structure. Similar effort is planned for the agriculture gallery in 1983. An unusual activity for the Division was planning and participating in a six-part television series on the earlier design and construction of the main history galleries. Fortunately sufficient records and staff memories remained to make this series both definitive and informative. It was shown on the local cable network and apparently there are plans to have it available for educational television. This venture into television was funded by the Friends of the Provincial Museum.

Other events of 1982 included advisory assistance to the Science Council of British Columbia in its project to study scientific and engineering innovation of the province. One member participated in the Canadian Historical Association's annual conference by giving a paper on the limitations of material history for research. The main staff change was the transfer of Theresa Molinaro to the Heritage Conservation Branch where she assumed curatorial responsibilities for Craigflower Schoolhouse and Manor.

VERTEBRATE ZOOLOGY DIVISION

Edward H. Miller, Curator

The Vertebrate Zoology Division spent an active year in collecting, curating, research, and public education. A major event was the appointment of a new assistant curator (of mammals), David W. Nagorsen who initiated procedural changes for the receipt and processing of the numerous mammal specimens we receive (e.g., through the Fish and Wildlife Branch). Another important event was the two-month field trip to the northeast corner of the province to collect specimens and record natural history observations, particularly on birds. Finally, several university students worked for four months on transcribing and filing thousands of observations on higher vertebrates, as part of the ongoing projects to document the phenology and distribution of British Columbia's mammals, birds, reptiles and amphibians.

Collections - The research collections were augmented by more than a thousand specimens, most of which were collected from late May to early July northeast of Fort Nelson. The majority of these were small mammals, including Bog Lemmings, Heather Voles, and Arctic Shrews, all valuable specimens from that little-known part of the province. Ornithological work in that period stressed observations and breeding records to further our knowledge of the nesting ranges and breeding abundance of Peace River species. Many other specimens were donated. Prominent among these was Miracle, the killer whale, whose skull was taken by our staff after the animal died of respiratory problems. We also acquired the skull of a Gray Whale, which was cleaned by being slung under a dock at the Institute of Ocean Sciences. Small marine invertebrates fed on the meat and fat for some months before it was sufficiently cleaned for drying and cataloguing. A large Sperm Whale was examined, photographed, and measured, but no skeletal material was taken from it. A series of skulls and partial skeletons of Bighorn Sheep was obtained from the Fish and Wildlife Branch, as a result of a large die-off of herds in the East Kootenays. Another important lot of specimens, about 150 Little Brown Bats, was received, which resulted from the killing of an entire nursery colony by a pest control firm on the mainland.

The herpetological collection has continued to grow slowly, because of selective collecting. In 1982, 36 lots representing four species were added (total now 15,551 lots). These were dominated by a moderate series of developmental stages of Wood Frogs, and a small

series of Striped Chorus Frogs. The most significant additions of reptiles was a Sharp-tailed Snake from Saltspring Island (the second record for the province), and a California Nightsnake (the first provincial record) from Kaleeden.

Many specimens of birds were donated by the general public, naturalists, and by the Fish and Wildlife Branch. Important specimens that came to hand were Broad-winged Hawk, Rock Wren, and McCown's Longspur. In all, 432 new specimens were added to the research collections, bringing the total to 17,667. The mammal collection grew by 745 to 11,146.

An important adjunct "collection" to the specimen collection is the Photo Records File. This is particularly important for documenting unusual occurrences of mammals, birds, reptiles and amphibians, because photographs can often be used in place of specimens as adequate proof of significant records. Thus, animals often do not need to be collected. Another important function of this file is allowing books and technical papers to refer unequivocally to noteworthy records by our photo-file accession number. Some examples of recent additions are: Burrowing Owl at Douglas Lake (first provincial record in three years); Tufted Duck and Barn Owl (first documented occurrences for the Interior); Anna's Hummingbird (range extension - Kitimat); and Dickcissel (second record for Vancouver Island). There are currently 809 records in this File.

Three other supporting files are British Columbia Nest Records Scheme (90,000 cards), the Vertebrate Distributional Atlas (600,000 records), and the Seabird Colonies (about 3,000 islands). The first is in the form of notes in standardized form about the nesting activities of the province's birds. These are received from the cooperating public, and are cross-referenced and filed here. The next is a growing file established with the aim of compiling accurate and reliable information about the distribution, occurrence, and phenology of all species of higher vertebrates in British Columbia. The last is a historical summary of seabird activity on the numerous islands along our coast. These records include museum specimens, photographs, reliable sightings, field notes, books, published papers, and unpublished government reports. Tens of thousands of entries were made in 1982, and the first phase (for reptiles and amphibians) is expected to be completed in 1983. The primary research collections continued to be used in research projects by Divisional staff and by outside workers. We loaned mouse specimens to Ottawa and warbler specimens to Berkeley, for example, and were visited by scientists who examined shearwaters, elk, and fox. As expected, most specimen loans pertained to our education collection. Nearly a hundred separate loans, totalling 600 specimens, were made available to schools, parks, artists, other British Columbia museums, and to interested non-professionals. Much time was spent on upgrading and organizing the education collection because of the heavy use it received.

Other visitors to the Division referred extensively to the files on literature, nest records, and wildlife cards. These totalled nearly 500 visitor-days, and included university researchers, environmental consultants, planners, authors of popular books and articles, interested non-professionals, and others.

The increasing value of existing collections, and their controlled growth led to some changes in storage and in personnel training. We acquired eight spacious cabinets for the storage of the nests and eggs of birds, with room for additions to that valuable old collection. The technician in charge visited the Western Foundation of Vertebrate Zoology, one of the world's largest egg/nest collections, for a week. He received training in modern techniques of preparation, curation, and collections management there. In addition, the Curator spent several weeks visiting important egg collections in the eastern United States and Canada, and obtained information about curatorial practices in each institution.

Taxidermy - Changing technology has brought freeze-drying to the fore of modern museum taxidermic methods. Our taxidermist spent considerable time practising techniques on our old small freeze-dryer, before attending a course on modern methods. He obtained valuable training and information about the roles of freeze-drying for display specimens of all kinds, including soft-bodied invertebrates, fish and amphibians - groups that are notoriously difficult to deal with in conventional ways. We expect this to have a substantial impact on the content and heuristic value of displays currently being planned.

Communicating - Public lectures were given by six of our staff of ten. The range of groups to which talks were given varied widely and included university seminar groups, community museums, local natural history clubs, churches, schools, other government branches, and professional societies. The Associate Curator was interviewed several times both on television and radio, and he, the Curator, and the Assistant Curator attended various governmental and professional meetings. Other contacts with the public were through the

hundreds of letters and thousands of 'phone calls inquiring about higher vertebrates of the province, and often requesting specific information.

Research - Research proceeded along several fronts. Specimens collected during the 1981 Brooks Peninsula expedition have been examined, and a report about them is being prepared. The skeleton of the unique Dwarf Sperm Whale that was washed up on Vancouver Island in 1981 (first record north of California) was studied and measured, and a paper about it submitted for publication. The Associate Curator completed compiling information on populations, and nesting parameters of Common Barn Owls in British Columbia, and completed his study of their food habits in the province with a review of them throughout North America. The Associate Curator completed and successfully defended his M.Sc. thesis (University of Toronto) on geographic variation in Snowshoe Hares. The Curator began several new projects: geographic variation in Common Seals, and in Upland Sandpipers and their eggs; geographic variation and the systematic significance of dowitcher displays; and island-mainland differences in structure and variation of the baculum in Townsend Voles. He also completed several sizeable data summaries, with the help of volunteers and technicians, on seal vocalizations and on morphometrics of seal teeth and jaws.

Publications - Significant publications in preparation or in press include: two bibliographies on British Columbia higher vertebrates; several separate components to atlases of British Columbia higher vertebrates; ecology of the Common Barn Owl in British Columbia and North America; winter pelage characteristics of Pacific northwest Snowshoe Hares; edited books Acoustic Communication in Birds, and Museum Collections and Biological Research; and papers on systematics of shorebirds based on voice.

Friends - This Division has received extensive support from volunteers in all manner of activities, including specimen preparation, cataloguing, lending specimens, filling out record cards, measuring specimens, and autopsying particularly valuable specimens. The skills and high motivation which characterize these people cannot be overstated, and our Division is deeply appreciative of their continuing involvement. Our research has received important support from the Friends of the Provincial Museum, in the form of equipment for analyzing animal sounds, and for measuring specimens; and as trips for improving technical skills and for studying important museum collections.

CONSERVATION DIVISION

Richard Rensha-Beauchamp, Chief

This year started well with Mary-Lou Florian on a consulting trip to Australia to advise the forest service there on preserving their aboriginal equivalent of our totem poles (but they are carved into living trees); with a Conservation Division policy written and accepted; and with Maggie Graham-Bell's marriage to Stuart Stark, a former museum employee.

Andrea Nelles was given permission to form an Environment Committee for the Museum to help control partitioning floor spaces without reference to environmental controls and to communicate with the heating plant. This committee has been most successful, particularly since the whole ventilation system in the Exhibits Building and all environmental controls in the Curatorial Tower have been renewed and are not yet properly calibrated.

The Division's research into ethylene oxide as a fumigant and its hazard to operators has been a major activity. Barbara Kennedy has been researching health aspects while David Hillman concentrated on the difficulties of desorbtion and flushing, and fumigation chamber safety.

Other areas of investigation were: Why cold storage for furs?; fibre optics as display illumination; and the continuing search for ways to stabilize waterlogged wood by counteracting cellular collapse.

Mary-Lou Florian, besides her work on the scientifically correct ethnographic catalogue, investigated problems in waterlogged archaeological wood, dendrochronology of totem poles for dating purposes, the environment as the main cause of deterioration of totem poles, the effects, if any, of ethylene oxide on artifacts and natural history specimens.

The year saw Nanaimo's Petroglyph Park re-organised and interpreted and the glyphs given better protection. This was a pleasure because discussions and planning has been going on for eight years. Several trips to Hankin Cove resulted in the collection of a culturally altered western red cedar.

Later in the year Maggie Graham-Bell visited Bella Bella to advise the band about a number of widely scattered memorial poles which are important to the band, but badly deteriorated.

With the installation of automatic controls to flush the vacuum fumigation chamber the operation time has been cut dramatically. The deciding factor in the purchase was the cost-recovery period, only two years.

Despite the foregoing, the main work of the Division remained the preservation of the collections. With Display Division and curatorial input, daily care and artifact cleaning in the exhibits carried on. Condition reports and preparatory work on all artifacts in temporary, travelling and permanent exhibits are the responsibility of the Division.

The year ended on a successful note. After much heartbreak and frustration the temperature and humidity in the Argillite Gallery was brought under control and the gallery was re-opened.

EDUCATION DIVISION

Shirley Cuthbertson, Chief

In 1982, the four teachers in the Division had their classifications changed to education officer. At the same time, they and other staff members were given new or different responsibilities, so that 1982 has been a year of change and adjustment. In response to new directives, Division staff did more "specials" for adult audiences than any other year, going out of the museum evenings or weekends with artifacts, specimens and slides. This extension programming included several other communities in British Columbia besides Victoria and Lower Mainland.

Curatorial extension - Museum staff from the Archaeology, Aquatic Zoology, Conservation, Ethnology, Education and Extension, and Vertebrate Zoology divisions gave public talks or lecture tours in Burnaby, Campbell River, Tofino, Ucluelet, Fort St. John and Rathtrevor Beach Park. One series for Chilliwack Museum was done by Wayne Campbell to open our Birds of Prey travelling exhibit there.

Travelling exhibits - Five exhibits from the National Museums of Canada and six from the British Columbia Provincial Museum went to 16 community museums in 1982. Alan Graves, the exhibits handler, with assistance from Ethnology and Exhibits divisions, installed or took down B.C.P.M. exhibits 34 times. These exhibits travel in the museum truck without crates. More exhibits were planned as crated exhibits in 1982, so that there was much less travel and man-hours involved in moving exhibits. One new exhibit, Woodworkers Art, was produced in 1982. Peter Corley-Smith also coordinated the tour of Aquatic Exotic to Newfoundland, Nova Scotia and Saskatoon.

A small temporary exhibit for a conference on David Douglas was developed with Botany Division. It was a hit at the conference, and since the topic is interesting to other communities, it has been crated and will travel within the province as a travelling exhibit.

Both curatorial extension and travelling exhibit production and circulation are funded by the National Museums of Canada.

The holiday program - Christmas, 1982

The temporary gallery for incoming exhibits was not available after September. Exhibits received from other museums and shown were: Spirits of Earth and Water, archaeology material from Newfoundland; Warship Wasa from Sweden; Newfoundland Photography; and the B.C.P.M. exhibit Woodworkers Art. It was not possible to install Australian Aboriginal Art because of closure of the gallery for temporary exhibits for asbestos removal.

Visitor Services - Maureen Gee had the museum brochure translated into French, German and Japanese. The translations are now available on request and may be sent to groups before their visit. Seven summer tour guides (on the Museum's budget) gave tours for nearly 14,000 tourists from June through August. The information desk was manned by volunteers during school hours from mid-October through May, and by the tour guides in the summer. One of the guides was French-speaking, and was able to give a tour in French to the wife of the Tunisian ambassador, as well as to other French-speaking visitors when requested.

Public Programs - Families attended a short spring series of five Saturday workshops. Using Prehistoric Tools was one given by a curator, Tom Loy, with Division staff conducting the rest. Because of the extra-long holiday break for schools at Christmas, Division staff conducted four open holiday programs. Because these were so popular, a few youngsters were not able to get in, and staff called on volunteers for help at very short notice. As usual, volunteer support was more ready and able than we had a right to expect.

School programs - From mid-October to mid-May there were 34 regularly scheduled programs per week in 1981/82; in the same period in 1982/83 there were 32 per week. After programs finished, docents stayed on to give tours for classes from outlying districts that could not come earlier in the year. Many people do not understand how the regular programs operate. The purpose of most of these activity programs is to complement the school curriculum with a

stimulating learning experience that schools could not provide.

Programs are researched and planned from February through June. The brochure is sent out for the first week in September and teachers fill out appointment request forms. Each booking is confirmed with a card and a printed guide for the program which outlines: aims and objectives; suggestions for student preparation and follow-up; a bibliography; and some rules. When the class arrives, four docents split students into four groups, and lead them to one of four "stations" in the activity room and gallery. The program focusses on selected objects and gives the students specific knowledge and understandings about these objects and their context. Each group will spend 10 - 14 minutes at each station, moving on to the next on a pre-arranged circuit. At the end of the program the class is reassembled in the coat area with the teacher and parent-aides, who have usually followed one of the groups.

Teacher Services - In 1982 the first of a series of information folders for teachers, The Coast: Rocky Shores, was printed. Division staff did several in-service workshops for teachers, five of them for Native Indian teacher aides and teachers in schools with large numbers of Native Indian students.

Kits - Except for the Kwakiutl Art Kit for the blind, research and development of kits was curtailed in 1982. The Skulls kit circulated in Kelowna school district from January through June.

Docents - There were 138 active docents in the spring and 137 in the fall, including the librarians for the volunteer library. In 1982, these volunteers donated 9,317 hours to the museum. Docent training in September-October comprised some 112 hours, with curators giving 32 sessions and education officers 43 sessions.

Highlight of the year was the invitation to all museum volunteers to tea at Government House, where the docents, gift shop volunteers and curatorial volunteers were thanked on behalf of the Lieutenant Governor for their support.

Statistics

Kind of program:	# people:
- staff specials	2,017
- school activity programs	17,597
- adult booked tours	1,033
- unguided group visits	18,162
- summer tour guides	13,717
- public programs	558
Total	53,084

Other activities - Rick Kool continued as one of the Museum's First Aid attendants. Jo Cruise became the Postal Coordinator because of the large number of computer labels she must prepare for bulk mailouts: for example Friends of the Provincial Museum (1,000), docents (150), and schools (1,800). Keeping The Friends' list updated takes several hours for as many as four mailouts a month. The University of Victoria's Continuing Education department co-sponsored a credit course for downtown students (especially public service) in the Museum for the first time. Various staff are active in several professional organizations: Canadian Museums Association, British Columbia Museum Educators' Group, Interpretation Canada, Committee for Education and Cultural Action group of International Council of Museums, B.C. Museums Association. Chris Tyrrell designed signage for the Transportation Collection at the request of Administration. Peter Corley-Smith encouraged and assisted staff from a number of divisions to produce a series of articles, most of which have appeared in The Islander.

Communities reached by Museum extension programs in 1982

EXHIBITS DIVISION

Alec James, Chief

Asbestos removal dominated 1982; as a result, it became necessary to close the natural history galleries for seven months while the contractor completed the work. In addition, all Exhibits staff with work stations in the basement had to be relocated while asbestos there was removed. This was disruptive and completely eliminated any possibility of building new permanent exhibits. Prior to the reopening of the natural history galleries the forest diorama was completely cleaned; both it and the seashore diorama were contaminated with debris and dust during the asbestos removal process.

Exhibits Group - The In the Soil exhibit was completed. This is a diorama depicting a cubic inch of soil in the coast forest, with all contents magnified 100 times natural size. An audio commentary with synchronized spotlights adds to the story.

Additions and revisions were made to the New Landscape and First Arrivals cases. These changes improve the communications success of both exhibits.

A new temporary exhibit gallery of 4800 sq. ft. on the second floor was designed. This will hold The Legacy in 1983. Designs were completed for the following Travelling Exhibits: Wild Harvest - plant foods of western Canadian Indians; Behold the Bird - a close look at a falcon; and Woodworker's Art - woodworking tools.

Woodworker's Art was on exhibit at the Museum as a major show prior to being circulated in the province. Many of the old tools were displayed in some of the rare old showcases saved from the now-demolished Birk's Building in Vancouver.

The Wild Harvest travelling exhibit took up most of the casting crew's time in 1982. Additional time was spent on finishing invertebrate models for In the Soil exhibit and in rebuilding Room 23, now the casting studio.

Among many additional jobs undertaken by the casting team was the recovery of a whale skull for the Vertebrate Zoology Division.

Trades Group - Exhibits tradesmen built the Wild Harvest showcases and wall panels and wired up all lighting. The Maritimes Gallery ceiling was removed and replaced so that electrical upgrading could take place.

The old Vertebrate exhibit was removed and the space prepared for the new travelling exhibits gallery. Amongst the hundreds of smaller jobs completed were: making the copy panels for the natural history exhibits; assembling Woodworker's Art; making a prototype for the better functioning of the sea cave's waves; and installing an electrical hook-up provided for In the Soil.

Graphics and Art Group - 1982 was busy with six publications and numerous small signs produced. The Wild Gardens poster was well received and is now displayed in the museum foyer. Wild Harvest involved the graphic artists who designed all the copy panels.

Sculptured models were made for the upcoming Fresh-water Exhibit as well as the invertebrate models for In the Soil. For the On Patrol exhibit, about the British Columbia Provincial Police, two model planes and one car were built. Planning models were built for the Fresh-water gallery, the foyer, the 2nd floor mezzanine, and the temporary exhibits gallery; replicas were made of some Indian artifacts for use by school groups.

Administration - Administration of the Division took on a new look for 1982 with the adoption of a Modified Matrix Management System. There is considerable potential for increasing productivity using this tool, but it will take time to fully use the system. Towards the end of the year, a 10-year plan for completing all permanent exhibits was produced and a presentation prepared for the Deputy Minister.

An exhibit symposium, sponsored by the Western Museums Conference, was held in Santa Barbara and five members of the staff were able to attend. Alec James was a speaker. All of us were subjected to intense questioning on the methods we use and many compliments were received about our methods and results.

Alec James spent four weeks visiting museums in Australia and New Zealand, on a travel fellowship funded by the Friends of the Provincial Museum. It was most informative. Meetings were held with museum staff in both countries and four slide/talks were given.

Operations - With the implementation of the Modified Matrix Management System, this section assumed responsibility for maintaining the natural history, anthropology and modern history galleries. Their most difficult task of the year was undoubtedly cleaning asbestos out of the natural history galleries.

In the modern history exhibit, considerable time was spent rebuilding the Gold Rush diorama; reopening, relocating and redesigning the Fannin exhibit, the Toby Jug exhibit, the Sewing exhibit, and the now annual Christmas in the Parlour exhibit.

Temporary exhibits assembled during the year included: Woodworker's Art, Warship Wasa, Earth, Spirits and Water, After Hours, and Newfoundland photographs.

In the main entrance, a program of monthly changing exhibits was initiated in 1982 known as Object of the Month. All curatorial divisions have taken part in this program.

A Museum Design Symposium was organized and held in Vancouver late in the year. Because the subject was museum design as opposed to exhibit design, many architects and many kinds of museum people attended this event, including several from the Museum staff. Funding for this symposium was provided through the courtesy of the Friends of the Provincial Museum.

THE MUSEUM LIBRARY

Mary Virtue, Librarian

After some delay, the museum's first librarian, Mary Virtue, was hired and began work on March 12. Her task of organizing the libraries in the museum began with developing and streamlining systems already in place.

A new system for ordering library materials (books, journals, photographs, photocopies, microfilm) was in place by July. During August and September the library was moved from the southeast corner of the Tower's second floor mezannine to the northwest corner. The new facility allows for more shelving and the surroundings are much more amenable to productivity.

Since the organization of the libraries, i.e. the cataloguing and classification, will require the aid of computer equipment, the thrust of the Division has been to provide library and information services to the staff of the Museum. Those services now offered are:

On-Line searching. These searches are done through the Legislative Library and reduce search time for subject material from days to minutes. Fifteen searches have been done.

Inter-library loans. Since March 12, standard inter-library loan request forms have been sent to all divisions, and 95 requests for material have been received. Of these 80 requests have been successfully completed. We have received only six requests from other libraries and four from individuals. The low request rate is due in part to the fact that the museum collection is virtually inaccessible. An inter-library loan policy for the museum has been drafted and approved.

Accessions List. Every 4 months, an accessions list is published by the library and sent to libraries and museums across Canada that have expressed interest.

Various searching tools have been acquired to assist in this information service. The major ones are:

1. A microfiche edition of the British Columbia Union Catalogue - a catalogue by author, title and subject of all books in public and college libraries in British Columbia including recent acquisitions at University of British Columbia.

2. A microfiche list of serials holdings from: University of Victoria, Simon Fraser University, University of British Columbia.

3. A microfiche edition of the catalogue of the Royal Ontario Museum.

4. Bound editions of Books in Print in Canada, the U.S.A. and the United Kingdom plus a listing of all periodicals in print.

MUSEUM TRAINING

Gregory Evans, Coordinator

From 1974 to 1981, the task of developing, coordinating and implementing a program of training seminars for community museums, archives and galleries throughout British Columbia, was largely a role of the Museums Advisor Division, a division of the British Columbia Provincial Museum. In addition, this Division provided study visits within the B.C.P.M. for community museum personnel as well as an annual, three-month, internship program for three people selected from a number of institutions within the province.

In 1981, the Museums Advisor Division moved to the Cultural Services Branch. With it went the function of developing and maintaining the seminar program. Then, early in 1982, the role, and position, of training coordinator returned to the British Columbia Provincial Museum.

The seminar program continued under the coordinator's direction until April, 1982, when it was taken over by the British Columbia Museums Association (B.C.M.A.). The training coordinator presented three seminars while the program was still under his guidance. Topics dealt with were: Museum and Gallery Administration, Designing A Museum Facility, and Management Techniques for Military Museums. These seminars and all those presented over the past several years, were made possible with the help of a grant from the Museums Assistance Program of the National Museums of Canada.

From April through to the end of July, the training coordinator assisted with the transfer of the seminar program to the B.C.M.A. He was involved in the organization of three of their seminars as well as assisting in the preparation of several sessions which were specially developed to meet the needs of the Ministry of Labour's Summer Youth Workers Program - Museum, Gallery and Archives Component. By early fall, the transfer of the entire seminar program was complete.

In 1982, for the sixth consecutive year, three people from community museums underwent internships at the British Columbia Provincial Museum. The program began during the first week of January and was completed in mid-April. The interns were: Esther Cote (Simon Fraser University Museum of Archaeology and Ethnology), Sally Robinson (Dawson City Museum and Historical Society), and Denise McCallum (Fort George Regional Museum, Prince George). This program was arranged and supervised by the training coordinator working in conjunction with British Columbia Provincial Museum Internship Committee. This program was made possible with the help of a grant from the Museums Assistance Program of the National Museums of Canada.

FRIENDS OF THE PROVINCIAL MUSEUM

President's Report for 1982

Friends! The year 1982 has been somewhat colourful if not spectacular. The resignations of the president May 10, 1982, and then the first vice-president on January 19, 1983, certainly added a flavor to the year not envisaged at its commencement. Being the twelfth year in our history may have some bearing on these happenings, should you be a believer in the stars. However, it was a good year for the Friends with a number of accomplishments.

Routinely, we saw the customary number of Board meetings and all were well attended. Executive meetings were numerous and they related to some internal workings of the organization of the Society and its responsibilities. A general operating policy was adopted

for the operation of the Gift Shop together with guidelines for the overall management and accounting of that entity. I am pleased to say that these changes, together with others that will be mentioned later, were in part prompted by a study done by the Long Range Planning Committee in 1975, under the Chairmanship of Mr. A. D. Turnbull. We still have a long way to go, not to mention the drafting of a new constitution for the Friends, a target for completion in 1983.

The Museum Gift Shop under the capable stewardship of Mrs. Ross, and together with the staff and volunteers, again had a successful year in spite of the economic climate. With sales and profits down accordingly, funds slightly in excess of the previous year were transferred to the Project Fund. Although it is not customary, members of the Executive Committee assisted with the annual stock taking on the afternoon of Friday, January 7.

Purchases under the category of Rare Objects with joint approval of the Director of the British Columbia Provincial Museum, and the president of the Friends, were made during the past year, included some of the following:

A Salish Bowl, $13,600; a Kerfed Bowl, $6,500 U.S.; six Rare Baskets, $3,588; a Chilkat Blanket, $6,000 U.S.; a mask, $6,000, being a quarter of the total cost, the balance being contributed by an agency of the Federal Government.

The Selection Committee, under the Chairmanship of Mr. John Wainwright, brought forward for approval by the Board during the year a number of projects for a total value of $382,700. These projects were of varied nature including equipment purchases, field research, purchases of rare items that otherwise might find their way into private hands and be taken out of the country, also auditorium programs of a museum related nature. All projects received the approval of the Director of the Museum before being placed for consideration by the Committee. While the Chairman has outlined the projects in his report, I would like to make mention of two for purpose of emphasis: 1) financing of the popular Newcombe Theatre productions to commence in March under the direction of Mr. Rick Caswell; 2) the purchase of a set of 16 rare Indian masks used for ceremonial purposes, that we were told would otherwise have been purchased by a private entrepreneur and sold individually to purchasers in other countries.

International Museum's Day - As in previous years, open house was held from 2:00 p.m. - 8:00 p.m. on May 18. The participation of the Friends was organized by Mr. Bernard Neary. In consideration of the contributors and guests of the event, the Friends sponsored a reception in the Board Room. Mr. Evan Wolfe, Minister, responsible for the Museum, together with a number of Municipal representatives also attended. The public attendance for the day was approximately that of the previous year. It is felt that the Friends should undertake a comprehensive advertising campaign to more forcefully bring to the attention of the public this annual event. A suggestion for a future project.

Business - Again, in accordance with the recommendation of the Long Range Planning Committee, steps have been taken to move towards that committee's suggestion of employing a Secretary-Manager on a part-time basis. While the position has been under active consideration for the past three years, this was brought into focus with the request last spring by Mr. McClary, accountant for the Projects and Donors funds, that he be relieved of his duties due to ill health. The search for a replacement was unsuccessful and finally an advertisement was placed in the local press. A number of replies were received and ultimately your committee engaged Mr. Wilfred Sharp to fill this position. Mr. McClary was thanked by the Friends and to mark the occasion of his retirement was presented with a stylized carving of the whale - the work of a native carver.

In conclusion I would be remiss if I did not thank the following individuals and groups for their untiring efforts on behalf of the Friends:

Mr. Yorke Edwards, Museum Director and Mr. Bill Barkley, Assistant Director and Museum Advisor on the Board this past year; Mrs. Ede Ross, Manager, staff members and volunteers of the Museum Gift Shop; Executive Members and Committee Heads of the Friends of the Provincial Museum; The Board of Directors of the Friends of the Provincial Museum; General McCaig, Treasurer, who has persevered with upgrading accounting procedures and has placed before us a program of planning for improvements of the Friends ability for even greater assistance to the Museum in the future; The staff of the Museum's general office; The Museum personnel as a whole; Mr. George Jones, lawyer; Thorne Riddell Chartered Accountants; and to all persons who have offered their encouragement and support.

Mr. Bruce Winsby
President

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Appendix 1

FRIENDS OF THE PROVINCIAL MUSEUM
OFFICERS, DIRECTORS AND COMMITTEE CHAIRMEN

April 1981

OFFICE	NAME	AFFILIATION
President	Mrs. Harriett Esselmont	
1st Vice-President Liaison	Mr. Bruce Winsby	
2nd Vice-President Selection	Mr. Bruce Brown	Maritime Museum
Treasurer	Mr. Neil Webster	
Secretary	Mr. Oliver Tomkins	
Members' Secretary	Miss Audrey Wilkin	
Past President	Mr. Jim Bryden	Victoria Natural History Society
Directors	Mrs. Margaret Arseneau	Victoria Numismatic Society
	Mrs. Alice Bond	Thetis Park N.S.A.
	Mr. Mowbray Clarke	
	Mrs. Sylvia Genge	Archaeological Society of B.C.
	Mr. Gordon German	
	Mr. Karel Hartman	Alpine Club of Can., V.I. Section
	Mrs. Grace Horgan	B.C. Indian Arts Society
	Mrs. Addie Humphries	Sierra Club
	Mrs. Muriel Hunt	Outdoor Club of Victoria
	Mrs. Greta Hutchings	Victoria Natural History Society
	Mrs. Gwyneth Kingham	Victoria Camera Club
	Mrs. Eugenie Myles	V.I. Rock and Alpine Garden Club
	Mr. Bernard Neary	Docent Association
	Mr. Ken Nitsui	V.I. Philatelic Society
	Mrs. Alizon Schreiber	
	Mrs. Margaret Smith	

OFFICE	NAME	AFFILIATION
	Mr. John Wainwright	B.C. Historical Assn. V.I. Br.
	Mrs. Kathleen Watson	
	Mrs. Virginia Winsby	
Accountant	Mr. Gordon McClary	
Gift Shop	Mrs. Ede Ross	

Appendix 2

MUSEUM VOLUNTEERS 1981

Docents

Edith Adamson
Doris Alder
Mary Alpen
Mary Anderson
Patrick Antiphon
Edna Arnott
Joan Ashe
Joe Barber-Starkey
Lois Bell
Aileen Birch
Ona Bonar
Marjorie Bradshaw
Mary Braybrooks
Betty Brevfogle
Elizabeth Brooke
Mary Burrage
Margaret Corey
Nina Corley-Smith
Phyllis Cochrane
Joan Corbett
Charlotte Crawford
Sandra Cowan
Lyndis Davis
Doreen Delahaye
Constance Dennis
Alison Donaldson
Carol Elder
Dorothy Fetterly
Roberta Fournier
Aslaug Garden
Sylvia Genge
Kathleen Gower
Barbara Graham
Shelagh Graham
Dorothy Gregg
Evelyn Grieg
Florence Guest
Jessie Guppy
Bruce Harvey
Elizabeth Harvey
Gladys Hayhurst
Rita Hayman
Bette Henry
Marilyn Hewgill
Esther Diegel
Min Hoffman
Betty Holms
Kay Howard
Sandra Howroyd
Stella Howling
Muriel Hunt
Sharon Ireland
Margaret Jamieson
Moya Johnson
Grant Jones
Jeannine Kring
Dorothy Kirkpatrick
Dorothy Lacas
Joan Laharty
Joyce Larkey
Darlene Legate
Marcia Leupold
Yvonne Mackenzie
Parso Mallette
Connie Micklewright
Larry Miller
Joan Moody
Connie Morgan
Ruth Morrison
Graeme Mudd
Margaret Muirhead
Rod Muirhead
Karen Mark
Joan McDiarmid
Dae McGillivray
Helen McDonald
Monique McKinnon
Marjorie McCaig
Dorothy McLean
Bernard Neary
Sheilagh Nemec
Ed Norman
Dorothy Norris
Mary Norris
Lois North
Margaret Patterson
Marian Pearson
Lavonne Peebles
Joyce Perkins
June Nowosad
Thlma Perks
Meg Philpot
Anne Poirier
Carrie Porteous
Michael Rainine
Jean Reading
Anne Reeves
Louise Reynolds
Sally Robinson
Shirley Ross
June Ruskin
Eva Rutherford
Audrey Sewards
Milly Stewart
Jean Taylor
Trudy Tetlock
Emily Towler
Barbara Travers-Smith
Tannie Turnbull
Avis Unwin
Didi Vanderbrink
Peter Van Dyke
Eva Viszlai
Keitha Walse
Liz Ward
Keith Watson
Marie West
Phyllis Williams
Janet Willoughby
Jean Wilson
Isobel Wilson
Nancy Wood
Robert Woolstencroft
Patrick Wilkinson
Rose Zimmerman

Adult Tour Guides

Vivienne Clarke
Audrey Elwood
Henry Gulliver
Marjorie King
Anne Thomas
Hetty Tosczak

Newcombe Volunteers

Mary Anderson
Edna Arnott
Pat Allwood
Lily Anstey
Alice Bond
Gladys Brown
Maureen Cracker
Charlotte Crawford
Nina Corley-Smith
John Dakin
Kay Dakin
Esther Diegel
Daisy Field
Silvia Genge
Rachel Goldie
Dorothy Gregg
Lois Grose
Florence Guest
Jim Harrington
Beatrix Hopkins
Kay Howard
Marjorie Hinds
Greta Hutchings
Marjorie King
Dorothy Lucan
Mary Macaulay
Beverly Mayhew
Helen McKay
Connie Micklewright
Larry Miller
Joan Moody
Edith Ortner
Joan Papert
Joan Perry
Pat Peterson
Ruth Phillips
Jean Reading
Jessie Robinson
Alizon Schreiber
Therese Streckl
Sylvia Voelk
Mrs. L. A. Weston
Joan Williams
Ian Williams
Jean Wilson
Evelyn White

Division Volunteers

AQUATIC ZOOLOGY

Anne Snowman
Brenda Trotter

ENTOMOLOGY

Dr. David Etheridge

HISTORY

Paul Akerhielm
Claire Bouchard
Sylvia-Ann Calder
Esther Diegel
Lesley Duthie
Marlene Howell-Jones
Leigh Van der Schyll
Alice Wilkins

ARCHAEOLOGY

Gretchen van den Bergh

ETHNOLOGY

Boris Atamenenko
Neil Benson
Marni Davis
Tina Doggart
Elizabeth Harvey
Olive Quayle
Sharon Sage
Audrey Sewards

BOTANY

Micheline Desrochers

EXHIBITS

Dr. Walter Ashford
Fran Benton

VERTEBRATE ZOOLOGY

Diana Cooper
Lyndis Davis
Alice Elston
Joan Forsberg
John Hamilton
Lori Hogg
William Jones
Jeff Reeve
Bernice Smith
Win Speechley
Mary Warren

Appendix 3

FRIENDS OF THE PROVINCIAL MUSEUM
OFFICERS, DIRECTORS AND COMMITTEE CHAIRMEN

April 1982

OFFICE	NAME	AFFILIATION
President	Mr. Oliver Tomkins	
1st Vice-President	Mr. Bruce Winsby	
2nd Vice-President	Mr. Bruce Brown	Maritime Museum of B.C.
Treasurer	Mr. Arch McCaig	
Secretary	Mrs. Joan Williams	
Members' Secretary	Miss Audrey Wilkin	
Past President	Mrs. Harriett Esselmont	
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Gift Shop	Mrs. Ede Ross	
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	Mr. Wes Bremner 1973-5	
	Mr. Gordon German 1975-7	

OFFICE	NAME	AFFILIATION
	Mr. Peter Platt 1977-9	
	Mr. James Bryden 1979-81	
	Mrs. Harriett Esselmont 1981-82	

Appendix 4

MUSEUM GIFT SHOP VOLUNTEERS

1982

Hilda Acklam
Dorothy Cameron
Marion Clubb
Charlotte Crawford
Dorothy Fletcher
Elaine Francis
Marjorie Gillies
Bernice Greaves
Aslaug Garden
Eileen Harris
Muriel Hunt
Helen Hutchinson
Min Hoffman
Gladys Hayhurst
Doreen Hamilton
Nora Innes
Joan Island
Dorothy Kirkpatrick
Jean Lorimer
Phyllis MacDonald

Agnes McConachy
Kay McLaren
Mel McLean
Isabel McLeod
Jean Maguire
Rita Mallett
Jean Marchuk
Jean Mellor
Eileen Moynhan
Connie Nathan
Peggy Newman
Betty Norris
Francis Patterson
Carrie Porteous
Jeanne Porter
Mary-Jo Read
Jean Reading
Nan Richardson
Rita Rogers
Loretta Ruston
Gladys Schroeder

Rosamond Sewell
Vera Smith
Tiny Soles
Win Speechly
Sheila Taylor
Joan Terry
Mary Thomas
Cynthia Thoms
Barbara Thorneycroft
Eileen Turner
Avis Unwin
Kay Watson
Betty Wigzell
Carol Wilson
Isabel Wilson
Mickey Winsby
Eileen Wood
Mary Wood
Helen Wright
Rose Zimmerman

Appendix 5

MUSEUM VOLUNTEERS

1982

Docents

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Mary Alpen
Mary Anderson
Edna Arnott
Joan Ashe
J. Barber-Starkey
Joan Baxter

Lois Bell
Betty Breyfogle
Caroline Burrage
Mary Burrage
Vivienne Clarke
Margaret Carey
Michelle Carlson

Lydia Clarkson
Phyl Cochrane
Joan Corbett
Nina Corley-Smith
Brends Costa
Charlotte Crawford
Patricia Ann Davidson

Lyndis Davis
Maureen Dawson
Sharon De Caro
Doreen Delahaye
Connie Dennis
Micheline Desrochers
Esther Diegel
Alison Donaldson
Joan Doney
Carol Elder
Audrey Elwood
Dorothy Fetterly
Roberta Fournier
William Francis
Aslaug Garden
Sylvia Genge
Barbara Graham
Elizabeth Graham
Shelagh Graham
Dorothy Gregg
Florence Guest
Jessie Guppy
Jane Gurr
Sandra Howroyd
Elizabeth Brooke
Bruce Harvey
Gladys Hayhurst
Rita Hayman
Renney Haynes
Patricia Hayward
Bette Henry
Marilyn Hewgill
Min Hoffman
Betty Holms
Beatrix Hopkins
Kay Howard
Stella Howling
Muriel Hunt
Marjorie King
Dorothy Lacas

Joan Laharty
Joyce Larkey
Edward Larrigan
Ruth Lash
Marcia LeClair
Parso Mallette
Jean Marchuk
Marian Mattison
Connie Micklewright
Larry Miller
Joan Moody
Ruth Morrison
Connie Morgan
Graeme Mudd
Margaret Muirhead
Rod Muirhead
Marjorie McCaig
Joan McDiarmid
Helen McDonald
Dae McGillivray
Dorothy McLean
Yvonne McKenzie
Monique McKinnon
Bernard Neary
Mary Niblock
Ed Norman
Dorothy Norris
Mary Norris
Edna Orrick
Margaret Patterson
Marian Pearson
Lavonne Peebles
Joyce Perkins
Thelma Perks
Florence Petersen
Meg Philpot
Betty Pidcock
Jean Pirie
Carrie Porteous
Michael Rainone

Jean Reading
Anna Reeves
Louise Reynolds
Sally Robinson
Shirley Ross
June Ruskin
Barbara Russell
Eva Rutherford
Kay Sessions
Miriam Shell
Margaret Shortliffe
Margaret Smith
Milly Stewart
Jane Sumner
Doreen Sutherland
Sylvia Tainsh
Jean Taylor
Trudy Tetlock
Anne Thomas
Hetty Tosczak
Emily Towler
Barbara Travers-Smith
Tannis Turnbull
Christine Turner
Florence Trew
Avis Unwin
Didi Vandenbrink
Eva Viszlai
Keitha Walsh
Keith Watson
Marie West
Phyllis Williams
Janet Willoughby
Isobel Wilson
Jean Wilson
Ron Wingfield-Digby
Nancy Wood
Daphne Wright
Robert Woolstencroft
Rose Zimmerman

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Edna Arnott
Pat Allwood
Lily Anstey
Alice Bond
Gladys Brown
Maureen Cracker
Charlotte Crawford
Nina Corley-Smith
Joan Dakin
John Dakin
Esther Diegel
Daisy Field
Sylvia Genge
Rachel Goldie
Dorothy Gregg

Lois Grose
Florence Guest
Jim Harrington
Beatrix Hopkins
Kay Howard
Marjorie Hinds
Greta Hutchings
Marjorie King
Dorothy Lacas
Mary Macaulay
Beverly Mayhew
Helen McKay
Connie Micklewright
Larry Miller
Joan Moody

Edith Ortner
Joan Papert
Joan Terry
Pat Peterson
Ruth Phillips
Jean Reading
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Alizon Schreiber
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Sylvia Voelk
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Joan Williams
Ian Williams
Jean Wilson
Evelyn White
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Division Volunteers

AQUATIC ZOOLOGY

Jeremy Watney

ARCHAEOLOGY

Gretchen van der Gergh

Jean Parfitt
Joyce Stewart
Dorothy Williams

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David Flegel
Trevor Goward
June Nowasad
Sandra Thomson

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David Jackman
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Marion Noakes
Olive Quayle
Sharon Sage
Audrey Sewards
Derek Swallow

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Alice Wilkins
Patrick Wilkinson

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Dianne Cooper
Lyndis Davis
Jessie Dunning
Alice Elston
Joan Forsberg
John Haegart
John Hamilton

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Maureen Holms
Joan Hooper
Tracy Hooper
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Mrs. Kate Jones
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Angela McClung
Pat McLaren

Angela Muellers
Lois North
June Nowosad
Jeff Reeve
Bernice Smith
Win Speechly
Doreen Sutherland
Mary Warren
Eldred Williams

Appendix 6

PROVINCIAL MUSEUM STAFF

October 1982

ADMINISTRATION

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Bill Barkley, Assistant Director
Doug Lockhart, Administrative Officer
Margaret Billings

Pat Burch
Sylvia Buckley
Isabel Dobbie

Vanessa Hebdon
Harold Hosford
Sally Rogerson
Wilma Robertson

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Greg Evans

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Robin Patterson
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Elaine Patterson
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Louise Rivard
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